



Syllabus of the course
«Probability Theory and Mathematical Statistics»

Specialty	073 Management
Study programme	Business-administration
Level of education	first (bachelor)
Discipline status	<i>Mandatory</i>
Teaching language	<i>English</i>
Course / semester	<i>1st course, 2nd semester</i>
Number of credits ECTS	5
Distribution by types of trainings and hours of study	<i>Lectures – 16 hours.</i>
	<i>Practical studies (seminars) – 16 hours.</i>
	<i>Laboratory studies – 16 hours.</i>
	<i>Independent training – 102 hours.</i>
Form of final assessment	<i>Exam /Pass</i>
Department	Department of higher mathematics, economical and mathematical methods, Simon Kuznets KNUE, room 329 (main building), +38(057)702-04-05 (or 3-33), <i>E-mail: kafmath@hneu.edu.ua, http://www.vm.hneu.edu.ua/</i>
Teacher (-s)	Misiura Ievgeniia Iuriivna, PhD, associate professor
Teacher's contacts	<i>misuraeu@gmail.com</i>
Days of the classes	according to the schedule
Consultations	distance, according to the schedule
<p align="center">The purpose of the course is forming future specialists' basic mathematical knowledge for solving theoretical and practical problems in professional activity of a competent specialist in any sphere of his activity; an ability to abstract thinking, analysis, synthesis; an ability to apply knowledge in practical situations; skills in the use of information and communication technologies; an ability to plan the activities of the organization and manage time; skills in analytical thinking and skills in using mathematical knowledge for formation of real processes and developments, and for solving economic problems.</p>	
<p align="center">Prerequisites for learning <i>Assimilation of the material of the discipline "Higher Mathematics"</i></p>	
<p align="center">Content of the course</p> <p>Content module 1. Probability Theory Topic 1. Empirical and logical foundations of probability theory. Basic theorems of probability theory, their economic interpretation. Topic 2. Scheme of independent tests. Topic 3. Distribution laws and numerical characteristics of a discrete random variable. Topic 4. Distribution laws and numerical characteristics of a continuous random variable.</p> <p>Content module 2. Mathematical Statistics Topic 5. Limited theorems of probability theory. Primary processing of statistical data. Statistical estimations of parameters of a distribution. Topic 6. Testing statistical hypotheses Topic 7. Elements of variance analysis Topic 8. Elements of correlation theory. Elements of regression theory</p>	
<p align="center">Material and technical support (software) of the course Software <i>MS Excel</i></p>	
Course page on the Moodle platform (personal training system)	<i>Syllabus (working program), working plan (technological card), recommended literature, journal of students' attendance, materials of lectures (notes and presentations), questions to independent work, guidelines to conducting practical and laboratory studies, tasks for independent work, tests for checking students' knowledge, example of an examination paper and a criteria of an assessment of examination work.</i> https://pns.hneu.edu.ua/course/view.php?id=3742



Assessment system of learning outcomes

Current control is carried out on a cumulative 100-point system (the maximum is 60 points; the minimum that allows a student to take the exam is 35); final control is conducted in the form of an exam according to the schedule of the educational process (maximum is 40 points, minimum is 25 points). More detailed information on assessment is given in the technological card of the discipline.

Accumulation of rating points in the course (example)

Types of training	Max points
Homework	7
Laboratory works	16
Written tests	16
Independent creative task	7
Colloquiums	14
Exam	40
Max points	100

Course policies

Policy of academic integrity (according to the Law of Ukraine "On Education") - "Teaching discipline is based on the principles of academic integrity - a set of ethical principles and statutory rules that should guide participants in the educational process during training, teaching and conducting scientific (creative) activities to ensure confidence in learning outcomes and / or scientific (creative) achievements. Violations of academic integrity are: academic plagiarism, self-plagiarism, fabrication, falsification, write-off, deception, bribery, biased evaluation. For violation of academic integrity, students may be held subject to the following academic liability: re-assessment (test, exam, test, etc.); re-passing the relevant educational component of the educational program. Write-off during control (modular) works is forbidden (including with use of mobile devices). <https://www.hneu.edu.ua/akademichna-dobrochesnist/>

More detailed information about competencies, learning outcomes, teaching methods, assessment forms, independent training is given in the Program of the course.