Syllabus of the educational discipline

«*Probability Theory and Mathematical Statistics*»

Specialty	051 Economics,073 Management
Educational program	International economics, Business-administration Logistic, Management of innovative activity
Level of education	first(bachelor)
Discipline status	*Base*
Teaching language	*English*
Course / semester	*1st course,2nd semester*
Number of credits ECTS	*5*
Distribution by types of trainings and hours of study	*Lectures – 24.hours.*
	Practical studies (seminars) – 12 hours.
	Laboratory studies – 12 hours.
	Independent training – 102 hours.
Form of final assessment	*Exam /Pass*
Department	Department of higher mathematics, economical and mathematical methods, Simon Kuznets KNUE, room 329 (main building), +38(057)702-04-05 (or 3-33), *E-mail: kafmath@hneu.edu.ua*, http://www.vm.hneu.edu.ua/
Teacher (-s)	MisiuraIevgeniiaIuriivna, PhD, associate professor *LebedevStepanSergovych*,assistent
Teacher's contacts	*misuraeu@gmail.com,Stepan.Lebedev@hneu.net*
Days of the classes	according to the schedule
Consultations	distance, according to the schedule

The purpose of the discipline 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, skills in analytical thinking and skills in using mathematical knowledge for formation of real processes and developments, and for solving economic problems.

Prerequisitesforlearning

Assimilation of the material ofthe discipline "Higher Mathematics"

Content of the educational discipline

Content module 1. Probability Theory

Theme 1. Empirical and logical foundations of probability theory.
Theme 2. Basic theorems of probability theory, their economic interpretation.
Theme 3. Scheme of independent tests.
Theme 4. Random variables and their economic interpretation.
Theme 5. Distribution laws and numerical characteristics of a random variable.
Theme 6. Multidimensional random variables

Content module 2. Mathematical Statistics

Theme 7. Limited theorems of probability theory. Primary processing of statistical data
Theme 8. Statistical estimates of distribution parameters.
Theme 9. Testing statistical hypotheses
Theme 10. Elements of correlation theory.
Theme 11. Elements of analysis of variance
Theme 12. Elements of regression theory

Material and technical support (software) of the discipline

Software *MS Excel*

Course page on the Moodle platform (personal training system)	*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. https://pns.hneu.edu.ua/course/view.php?id=3742

Recommendedliterature

1.Лабораторний практикум ізнавчальноїдисципліни «Теоріяймовірностей та математична статистика» : навч. посіб. / Е. Ю. Железнякова, І. Л. Лебедєва, Л. О. Норік, К. В. Стєпанова – Харків : ХНЕУ ім. С. Кузнеця, 2016. – 184 с. **2.** Малярець Л. М. Математика для економістів. Теоріяймовірностей та математична статистика: навч. посіб. У 3-х ч. Ч.3 / Л. М. Малярець, І. Л. Лебедєва, Л. Д. Широкорад – Харків : Вид. ХНЕУ, 2011. – 568 с. **3.**Малярець Л. М. Практикум з теоріїймовірностей та математичної статистики в Excel : навч.-практ. посіб. / Л. М. Малярець, І. Л. Лебедєва, Е. Ю Железнякова. – Харків : Вид. ХНЕУ, 2007. – 160 с. **4.** Малярець Л.М. Теоріяймовірностей і математична статистика у вправах, прикладах та задачах : навч.-практ. посіб. / Л. М. Малярець, А. В. Ігначкова, Л. Д. Широкорад – Харків : Вид. ХНЕУ, 2010. – 548 с. **5.** Теорія ймовірностей та математична статистика : практикум [Електронний ресурс] / Е. Ю. Железнякова, Л. О. Норік ; Харківський національний економічний університет ім. С. Кузнеця. – Електрон. текстові дан. (9,34 МБ). - Харків : ХНЕУ ім. С. Кузнеця, 2019. – 320 с. **6.**МісюраЄ. Ю..Теоріяймовірностей. Конспектлекцій / Є. Ю. Місюра. – Х. :Вид. ХНЕУ, 2013. – 95 с. (Англ. мов.)

Assessmentsystemoflearningoutcomes

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 discipline *(example)*

Types of training	Maxpoints
Homework	**9**
Competence oriented tasks	**12**
Written tests	**18**
Independent creative task	**7**
Colloquiums	**14**
Exam	**40**
Max points	**100**

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		
64 – 73	D	satisfactory	
60 – 63	E		
35 – 59	FX	unsatisfactory	not pass
1 – 34	F		

Discipline 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 Syllabus (working plan)of the educational discipline *(http://repository.hneu.edu.ua/handle/123456789/20278).*

Syllabus approved at the meeting of the Department "August 20", 2020. Protocol №1