Syllabus of the course
«*Probability Theory and Mathematical Statistics*»

Specialty	*D3 Management*
Study Programme	*Business-administration*
Study cycle (Bachelor, Master, PhD)	*the first (Bachelor) level of higher education*
Course status	*mandatory*
Language	*English*
Term	*first year, second semester*
ECTS credits	*5*
Workload	*Lectures – 16 hours.*
	Practical studies – 16 hours.
	Laboratory studies – 16 hours.
	Self-study – 102 hours.
Assessment system	*Grading including Exam*
Department	*Department of Economic and Mathematical Modelling, auditorium 329 of the main building* *phone: (057)702-04-05 (add. 3-33)* *website: http://www.vm.hneu.edu.ua/*
Teaching staff	*Ievgeniia Iuriivna Misiura, PhD in Technics, Associate professor*
Contacts	*Ie. Iu. Misiura ievgeniia.misiura@hneu.net*
Course schedule	*Lectures: according to the schedule* *Practical studies: according to the schedule* *Laboratory studies: according to the schedule*
Consultations	*At the Department of Economic and Mathematical Modelling, offline, according to the schedule, individual, PNS chat.*

Learning objectives and skills:
is forming future specialists' basic mathematical knowledge for solving theoretical and practical problems in professional activity of competent specialists in a service sphere, skills of analytical thinking and skills of using mathematical knowledge for formation of real processes and developments, and for solving economic problems

Structural and logical scheme of the course

Prerequisites	Postrequisites
High mathematics	Statistics
Informatics	Econometrics
	Analytical support of business management
	Technologies of decision making in business
	Training course «Enterprise management automation»

Course content
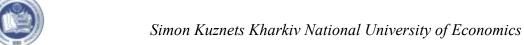
Module 1: *Probability Theory*
Topic 1. Empirical and logical foundations of probability theory. Basic theorems of probability theory, their economic interpretation.
Topic 2. Scheme of independent tests.
Topic 3. Distribution laws and numerical characteristics of a discrete random variable.
Topic 4. Distribution laws and numerical characteristics of a continuous random variable.
Module 2: *Mathematical Statistics*

Topic 5. Primary processing of statistical data. Statistical estimations of parameters of a distribution.
Topic 6. Testing statistical hypotheses
Topic 7. Elements of correlation theory. Elements of regression theory
Topic 8. Elements of variance analysis

Teaching environment (software)
Multimedia projector, S. Kuznets PNS, Corporate Zoom system, software: MS Excel

Assessment system
The University uses a 100-point cumulative system for assessing the learning outcomes of students.
Current control is carried out during lectures, practical, laboratory and seminar classes and is aimed at checking the level of readiness of the student to perform a specific job and is evaluated by the amount of points scored:
− for courses with a form of semester control as an exam: maximum amount is 60 points; minimum amount required is 35 points.
The final control includes current control and an exam.
Semester control is carried out in the form of a semester exam or grading.
The final grade in the course is determined:
− for disciplines with a form of exam, the final grade is the amount of all points received during the current control and the exam grade.
During the teaching of the course, the following control measures are used:
Current control: colloquiums (estimated at 6 points (two colloquiums during the semester – the total maximum number of points – 12)); written tests (maximum score – 6 points (two written tests during the semester, total maximum number of points – 12)); homework (maximum score – 2 points (seven homework during the semester, total maximum number of points – 14 points)); laboratory works (maximum score – 2 points (eight laboratory works during the semester, total maximum number of points – 16 points)); an independent creative task (maximum score – 6 points).
Semester control: Grading including Exam (40 points).

More detailed information on assessment and grading system is given in the technological card of the course.

Course policies
Teaching of the academic discipline is based on the principles of academic integrity.
Violation of academic integrity includes academic plagiarism, fabrication, falsification, cheating, deception, bribery, and biased assessment.
Education seekers may be brought to the following academic responsibility for breach of academic integrity: repeated assessment of the corresponding type of learning activity.

More detailed information about competencies, learning outcomes, teaching methods, assessment forms, self-study is given in the Course program