



Syllabus of the educational discipline «Higher Mathematics»

Specialty	073 Management
Educational program	073.020 Management of innovative activity
Level of education	first(bachelor)
Discipline status	Base
Teaching language	English
Course / semester	1 st course, 1 st 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, assistant
Teacher's contacts	misuraeu@gmail.com , Stepan.Lebedev@hneu.net
Days of the classes	Monday, Tuesday, Wednesday, Thursday, Friday
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.	
Prerequisites for learning	
<i>Assimilation of the material of school disciplines "Algebra" and "Geometry"</i>	
Content of the educational discipline	
Content module 1. Linear algebra and analytical geometry	
Theme 1. The elements of the theory of matrices and determinants	
Theme 2. The general theory of the system of linear algebraic equations	
Theme 3. The elements of vector algebra	
Theme 4. Elements of analytical geometry	
Content module 2. The elements of mathematical analysis	
Theme 5. The limit of a function and continuity	
Theme 6. Differential calculus of the function of one variable	
Theme 7. Analysis of the function of several variables	
Theme 8. The indefinite integral	
Theme 9. The definite integral and its application	
Theme 10. Differential equations	
Theme 11. Series	
Material and technical support (software) of the discipline	
Software <i>MatLab, Octave</i>	
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=3612>

Recommended literature

1. Вища математика : базовий підручник для вузів / під ред. В. С. Пономаренка. – Харків : Фоліо, 2014. – 669 с.
2. Вища математика: математичний аналіз, лінійна алгебра, аналітична геометрія [електронний ресурс]: підручник / [авт. кол. : Пономаренко В. С., Малярець Л. М., Афанасьєва Л. М. та ін. ; за ред. В. С. Пономаренка]. – Мультимедійне інтерактивне електрон. вид. комбінованого використ. (412 Мб). – Х.: ХНЕУ ім. С. Кузнеця, 2015. – Назва з тит. екрана. – ISBN 978-966-676-568-3.
3. Guidelines for practical tasks in an analytic geometry of the academic discipline "Higher and Applied Mathematics" for foreign and English-learning full-time students of the preparatory direction "Management" / compiled by Ie. Iu. Misiura. – Kh. : Publishing House of KhNUE, 2011. – 76 p. (English, Ukrainian)
4. Methodical recommendations for the conduct of the practical studies in the academic discipline "Higher mathematics" for foreign and English-learning students of the preparatory direction "Management" of the full-time education / complied by Ie. Iu. Misiura. – Kh. : Publishing House of KhNUE, 2010. – 44 p. (English, Ukrainian)
5. Математика для економістів: практ. посіб. до розв'язання задач економічних досліджень в MatLab / Л. М. Малярець, Є. В. Резнік, О. Г. Тижненко. – Х. : Вид. ХНЕУ, 2008. – 212 с.

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 discipline (example)

Types of training	Max points
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	satisfactory	
64 – 73	D		
60 – 63	E	unsatisfactory	not pass
35 – 59	FX		
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-dobrocheshnist/>

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/123456789/19987>).