

SYLLABUS

The spring semester of the 2024-2025 academic year
Educational program 7M05409 - Applied and Computational Mathematics
7M05406 - Fundamental and Applied Mathematics

ID and name of the discipline	Independent work of a master student (IWMS)	Number of credits			Total number of credits	Independent work of a master student under the guidance of a teacher (IWMST)
		Lectures (L)	Practice. lessons (PL)	Lab classes (LC)		
12512 Foreign language (professional)	4 (IWMS)	-	2	-	2	6 (IWMST)
ACADEMIC INFORMATION ABOUT THE DISCIPLINE						
The training format	Cycle, module component	Types of lectures	Types of practical training	The form and platform of the final control		
Offline	(CD) Core discipline. M1: Module of the history and Philosophy of science. (UC) University component.		Trainings, discussions, presentations, brainstorming, case study technology, round table, situational tasks, etc.	Written exam (offline)		
Lecturer	Muldabekova K.T.					
e-mail:	kamshat11@mail.ru					
Mobile:	+7015953111					
ACADEMIC PRESENTATION OF THE DISCIPLINE						
The purpose of the discipline	Expected learning outcomes			Indicators of achievement		
The purpose of the discipline is to form practical skills in various types of speech activity in a foreign language. The training course builds the ability to perceive, understand and translate information in the modern global space, participate in scientific events to test their own research. The discipline is aimed at improving competencies in accordance with international standards of foreign language education	As a result of studying the discipline, the student will be able to:					
	1. Listening comprehension: to understand authentic speech of a general, professional and scientific nature.			1.1 Determines the content of the listened text.		
				1.2 Extracts information from the listened text.		
	2. Reading: reads and translates authentic texts on the specialty in a foreign language, as well as extract the necessary information from the reading of a scientific text.			2.1 Student knows the basics of translating a scientific text in a foreign language.		
				2.2 Analyzes the information of reading.		
	3. Speaking: applies professional vocabulary and terminology necessary for effective communication in a professional environment within the framework of your specialty.			3.1 Uses business vocabulary to maintain a conversation on a professional and scientific topic.		
				3.2 Student makes presentations, reports, presentations, and reviews on various scientific and professional topics.		
	4. Writing: to compose written texts of an informative nature (message, report, review, scientific and technical documentation); to annotate texts on the profile of the specialty and on research topics; it is correct and logical to formalize your thoughts in writing.			4.1 Annotates the literature on the specialty in English in order to obtain professional information.		
4.2 Performs written translation of texts of a specialty and scientific nature.						
5. Prepares presentations and project work in a foreign language.			5.1 Speaks the necessary vocabulary to defend presentations and projects in a foreign language.			

		5.2. Has skills in working with multimedia tools and applications in a foreign language (Multitran, Reverso Context, etc.)
Pre-requisites	"Foreign language" in the 1st year of the Bachelor's degree	
Post-requirements	Undergraduates can apply the acquired knowledge in professional written and oral communication, as well as to obtain a Ph.D. degree.	
Educational resources	Basic literature: 1. Mathematical Logic, Heinz-Dieter Ebbinghaus, Jörg Flum, Wolfgang Thomas (2021, 3rd ed. ISBN 978-3-030-73839-6) 2. PROFESSIONAL ENGLISH FOR MATHEMATICS mathematics. Part I. / Абдрахманова А.А., Мубаракшина А.М. – Казань: Казан. ун-т, 2017. Additional literature: 1. Measure, Integration & Real Analysis, Sheldon Axler (2020, ISBN 978-3-030-33143-6) 2. More Explorations in Complex Functions, Richard Beals, Roderick S.C. Wong (2023, ISBN 978-3-031-28287-4) 3. A Course in Commutative Algebra, Kemper, Gregor, (2010, ISBN 978-3-642-03544-9) Online resources: 1. www.softwaresuggest.com What is Educational Management: Types, Importance and Benefits. 2. eprints.um.edu.my Theories of Educational Management and leadership. 3. MOOC: Academic Writing: The Structure of a Research Paper. On the platform open.kaznu.kz. 4. https://www.ebooks.com › en-us 5. http://dictionary.cambridge.org 6. http://www.ditext.com/russell/russell.html 7. http://www.fallacyfiles.org/taxonomy.html Software 1. Reverso Context. https://context.reverso.net/	

Academic policy of the discipline	The academic policy of the discipline is determined by the Academic Policy and the Policy of Academic Integrity of the Al-Farabi Kazakh National University. The documents are available on the main page IS University. Integration of science and education. The research work of students, undergraduates and doctoral students is a deepening of the educational process. It is organized directly at departments, laboratories, scientific and design departments of the university, in student scientific and technical associations. The independent work of students at all levels of education is aimed at developing research skills and competencies based on obtaining new knowledge using modern research and information technologies. The teacher of the research university integrates the results of scientific activity into the topics of lectures and seminars (practical) classes, laboratory classes and tasks of the IWMST, (IWMS), which are reflected in the syllabus and are responsible for the relevance of the topics of training sessions and assignments. Attendance. The deadline for each task is indicated in the calendar (schedule) for the implementation of the content of the discipline. Failure to meet deadlines leads to the loss of points. Academic integrity. Practical/laboratory classes, IWMS develops students' independence, critical thinking, and creativity. Plagiarism, forgery, the use of cheat sheets, cheating at all stages of completing tasks are unacceptable. In addition to the basic policies, the observance of academic integrity during theoretical training and exams is regulated by the "Rules for conducting final control", "Instructions for conducting final control of the autumn/spring semester of the current academic year", "Regulations on checking text documents of students for the presence of borrowings". The documents are available on the main page IS University. Basic principles of inclusive education. The educational environment of the university is designed as a safe place where is always support and equal treatment from the teacher to all students and students to each other, regardless of gender, race/ethnicity, religious beliefs, socio-economic status, physical health of the student, etc. All people need the support and friendship of peers and fellow students. For all students, making progress is more about what they can do than what they can't. Diversity enhances all aspects of life. All students, can receive counseling by mobile phone +77015953111 / e-mail kamshat11@mail.ru or video communication in MS Teams.
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INFORMATION ABOUT TEACHING, LEARNING AND ASSESSMENT

Point-rating letter-based assessment system for accounting of academic achievements				Assessment methods	
Evaluation	The digital equivalent of points	Scores, % content	Assessment according to the traditional system	Criteria-based assessment – the process of correlating the actual achieved learning outcomes with the expected learning outcomes based on clearly defined criteria. Based on formative and summative assessment. Formative assessment – the type of assessment that is carried out in the course of daily learning activities. It is the current indicator of academic performance. Provides an operational relationship between the student and the teacher. It allows you to determine the student's capabilities, identify difficulties, help in achieving the best results, and timely adjust the educational process for the teacher. The performance of tasks, the activity of work in the audience during lectures, seminars, practical classes (discussions, quizzes, debates, round tables, laboratory work, etc.) is evaluated. Acquired knowledge and competencies are evaluated. Summative assessment – the type of assessment that is carried out upon completion of the study of the section in accordance with the discipline program. It is conducted 3-4 times per semester when performing IWMS. This is an assessment of the development of expected learning outcomes in relation to descriptors. It allows you to determine and record the level of discipline development over a certain period. Learning outcomes are evaluated.	
A	4,0	95-100	Excellent		
A-	3,67	90-94			
B+	3,33	85-89	Good		
B	3,0	80-84			
C+	2,33	70-74			
C	2,0	65-69			
C-	1,67	60-64	Satisfactory		
D+	1,33	55-59			
D	1,0	50-54			
FX	0,5	25-49			
F	0	0-24	Unsatisfactory		

Calendar (schedule) for the implementation of the content of the discipline. Teaching and learning methods.

A week	Topic name	Number of hours	Max. mark
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Module 1. Introduction to the Subject: The history of mathematics

1	PC1: «The history of ancient mathematical schools» Presentation, retelling, discussion.	2	4
	IW 1. Academic Writing: The Structure of a Research Paper on the platform of open.kaznu.kz. Lecture 1. How to formulate the Title of a research paper.		1
2	PC. 2: «Fields of mathematics» Presentation, retelling, discussion.	2	4
	IW 2. The Structure of a Research Paper. On the platform open.kaznu.kz. Lecture 2. How to write the Abstract for a research paper		1
	IWMST 1. The theme: «Mathematical problems»		
3	PC. 3. «Counting in the Early Ages» Presentation, retelling, discussion.	2	4
	IW 3. How to write the Introduction to a research paper		1

	IWMS 1. Write an essay on the topic: «The Development of Mathematics in the 17th Century»		20
4	PC 4. «Numeration Systems and Numbers»	2	4
	IW 4. How to write a Literature Review?		1
5	PC 5. «History of Mathematics: 17th – 20th centuries» Presentation, retelling, discussion.	2	4
	IW 5. Ancient Numeration Systems.		1
	IWMST 2. Consulting on completed tasks 2. Preparing an individual presentation on the topic: «. ARITHMETIC »		
Module 2. Mathematics as a science			
6	PC 6. «Mathematics is the language of science» Presentation, retelling, discussion.	2	4
	IW 6. «Mathematical problems»		1
	IWMS 2. Defending the presentation on the topic: «Mathematics in real life»		20
7	PC 7. «Fields of mathematics» Presentation, retelling, discussion.	2	4
	IWMST 3. Consulting on completed tasks MC 1		
	IW 7. «Four basic operations of Arithmetic»		1
	Midterm control 1: 1. Render the text on specialty from English into Russian/Kazakh 2. Write 6 questions on the content of the text. 3. Write an essay on the topic:		25
	Midterm control 1		100
8	PC 8. «Arithmetic operations of fractions» Presentation, retelling, discussion.	2	4
	IW 8. «Addition, subtraction, multiplication, and division of fractions»		1
	IWMST 4. «Algebra as a broad field of mathematics» (discussion)		
9	PC 9. «Forming the value of a healthy lifestyle among students through mathematical problems» Presentation, retelling, discussion.	2	4
	IW 9. «The Role of Artificial Intelligence Detecting and Preventing Phishing email»		1
	IWMST 5. Consulting on completed tasks Tema: Masters' program in Kazakhstan and abroad		
10	PC 10. «Some integrals involving Struve and modified Struve functions» Presentation, retelling, discussion.	2	4
	IW 10. «Functions in the real world»		1

	IWMS Write an essay on the topic «Mathematics – the Language of Science»		20
Module 3. Famous people in mathematics			
11	PC 11. «Mathematics and language» Presentation, retelling, discussion.	2	4
	IW 11. Special text: «Mathematics and Computers»		1
12	PC 12. «20th century Mathematics» Presentation, retelling, discussion.	2	4
	IW 12. Special text « Euclid»		1
13	PC 13. «Galilei» Presentation, retelling, discussion.	2	4
	IW13. «Pierre de Fermat» (Discussion)		1
	IWMS 4. Tema: Albert Einstein...Presentation.		20
14	PC 14. «N. I. Lobachevsky» Presentation, retelling, discussion.	2	4
	IW 14.. Special text: «The eccentric British mathematicians»		1
15	PC 15 «The famous mathematicians in Kazakhstan» Presentation, retelling, discussion.	2	4
16	IW. 15. «Askar Zhumadilov» (Discussion)		1
	Attestation		
	IWMST 6. Consulting on completed tasks MC 2		
	MC 2: 1. Render the text on specialty from English into Russian/Kazakh 2. Write 6 questions on the content of the text. 3. Write an essay on the topic...		20
Midterm control 2			100
Final control (exam)			100
TOTAL for course			100

Executer/d. Dean

Chair of the Academic Committee
on the Quality of Learning and Teaching

Executer/d. Head of Department

Lecturer




Dzholdasbekova B.U.

Sarsenbay Zh. A.

Dosmagambetova D.J.

Muldabekova K.T.

Criteria for evaluating IWMS based on written assignment

Criteria	«Excellent» 20-25 %	«Good» 15-20%	«Satisfactory» 10-15%	«Unsatisfactory» 0-10%
Introduction	The introduction fully reveals the topic of the essay	The introduction does not fully reveal the topic of the essay	The introduction is not related to the topic of the essay	The introductory part of the essay is missing
The formulation of the thesis	The thesis is completely related to the topic, formulated clearly and clearly	The thesis is related to the topic, but it is formulated indistinctly, blurily.	The thesis is not related to the topic	The thesis of the essay is missing
Argumentation	The presence of arguments from other sources corresponding to the thesis and confirming the position of the author	The presence of arguments that do not correspond to the thesis	The absence of arguments from other sources confirming the author's position	The complete absence of arguments
Compositional integrity and consistency	Originality (interesting clutches, unexpected turns, presentation of the material)	Композиционная цельность, логичность, последовательность.	Lack of originality	Lack of originality, consistency and consistency
Conclusion	The conclusion is clearly formulated and linked to the thesis	The conclusion is not clearly formulated	The conclusion is not related to the thesis	There is no output
Speech culture	The use of artistic and visual means and stylistic figures, the richness of vocabulary	Emotionality, vivacity of speech	There are no expressive language tools	Vocabulary poverty
Spelling	There are no errors, 1 non-rough error is allowed (grammatical or spelling)	1-3 errors (grammatical or spelling)	4 mistakes	More mistakes
Punctuation	There are no mistakes, 1 non-rough mistake is allowed	1-3 mistakes	4 mistakes	More mistakes
Speech mistakes	There are no speech mistakes	There are 1-2 speech mistakes	There are 3-5 speech mistakes	More mistakes

Criteria for evaluating the presentation of master students in IWMS

Criteria	«Excellent» 25-30%	«Good» 20-20%	«Satisfactory» 15-20%	«Unsatisfactory» 0 – 15%
Compliance of the presentation content with its topic and objectives	The presentation is fully consistent with the topic and the tasks set.	The presentation fully corresponds to the topic, but partially corresponds to the tasks set.	The presentation partially corresponds to the topic.	The presentation does not correspond to the topic and the tasks set.
Completeness of the topic disclosure	The topic is fully disclosed.	The topic has been disclosed, but some cases of presentation are not fully presented, which requires an addition.	The topic has not been fully disclosed.	The topic has not been disclosed at all.
The ability to combine materials and draw concise conclusions	The material is integrated, the output is complex, factual and understandable.	The material is integrated, the actual result is given.	The material is not fully integrated, the output is not accurate, and it is very long.	The material is not integrated, there is no output.
Illustrative design of the presentation	The quality of the illustrative information is very high.	The quality of the illustrative information is average.	The illustration is insufficiently informed.	There is no illustration at all.
Preparation of the presentation in accordance with the requirements	During the preparation of the presentation, the basic requirements were fully met.	During the preparation of the presentation, the basic requirements were partially met.	The basic requirements were not met when preparing the presentation.	Complete inconsistency of the presentation with the requirements.