

“Approved”  
Vice-President

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**MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE**

( proprietor )

**V.N. Karazin Kharkiv National University**

( university )

**Level of higher education**

the second (Master of Science) level

Apprenticeship – 1 year 9 months  
on the basis of bachelor's degree

Educational qualification: Master in mathematics

**Training of** Master of Science  
( level of higher education )

**EDUCATIONAL PLAN for 2022-2024**  
**area of knowledge** 11 Mathematics and statistics  
( code and title of area of knowledge )

**speciality** 111 Mathematics  
( code and title of speciality )

**according to educational-research program** Pure mathematics (the English language of instruction)  
( code and title of program )

**specialization** \_\_\_\_\_  
( code and title of specialization )

**Form of education** full-time

( full-time, by correspondence, distance )

**I. TIME-TABLE OF EDUCATIONAL PROCESS**

Year	September				October				November				December				January				February				March				April				May				June				July											
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49			
1	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T/C	C	C	C	K	K	K	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T/C	C	C	C	K	K	K	K	K	K	K	K
2	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T/C	C	C	C	K	K	K	T	T	T	T	T/П	T/П	T/П	T/П	T/П	T/Д	T/Д	T/Д	T/Д	C	Д	Д													
3																																																				
4																																																				
5																																																				
6																																																				

**II. TOTAL DAYS FROM THE TIME BUDGET, weeks**

Year	Theoretical studies	Examinations and tests	Trainings	Certification examination	Thesis preparation	Vacations	Total
1	32	8				12	52
2	28	6	6		4	3	39
3							
4							
5							
6							
Total	60	14	6	0	4	15	91

**LEGEND:**

- T - theoretical studies
- C - examinations
- П - training
- K - vacations
- // - certification examination
- Д - thesis preparation and defence
- T/C - tests

**TRAININGS**

Title of training	Term
Thesis scientific research training (no study leave granted)	4

**CERTIFICATION**

Certification examination	Master's thesis
	<b>Master's thesis</b>

**III. PLAN OF EDUCATIONAL PROCESS**

Code	COURSES AND RESEARCH WORKS	Terms distribution					Amount of ECTS- credits	Amount of academic hours						Distribution of class hours per week in terms												
		Four-level evaluation scale	Two-level evaluation scale	Tests	Individual tests			Total	Total class hours	Class hours				Self-preparation	1 year	2 year	3 year	4 year	5 year							
					abstracts, translations	computational-graphic works				research works	including:				Terms											
											Lectures	Laboratory examinations	Practical classes		Seminars	1	2	3	4	5	6	7	8	9		
Amount of weeks per term															16	16	16	12								

### 1. COMPULSORY COMPONENTS

#### 1.1 Cycle general training

1	Global problems of modernity		1				3	90	32	32				58	2													
2	Ukrainian as a foreign language	2	1	2	3		6	180	96			96		174	2	2	2											
3	Partial differential equations	1		1			6	180	64	64				116	4													
4	Algebra II	1		1			6	180	64	64				116	4													
5	Differential geometry of manifolds	1		1			6	180	64	64				116	4													
6	Functional analysis II	1		1			6	180	64	64				116	4													
<b>Total cycle 1.1</b>				6	3		33	990	384	288		96	696	20	2	2												

#### 1.2 Cycle of professional training

1	Complex analysis II	2		1			5	150	64	64				86	4													
2	Optimization and control theory	2		1			5	150	64	64				86	4													
3	Master's seminar		2,3,4				13	390	88			88	302		2	2	2											
4	Term scientific research work		2,3			2	14	420					420															
5	Thesis scientific research training (no study leave granted)		4				9	270					270															
6	Thesis preparation	4					6	180					180															
<b>Total cycle 1.2</b>				2		3	52	1560	216	128		88	1344		10	2	2											
<b>Total compulsory components</b>				8		3	85	2550	600	416		96	88	2040	20	12	4	2										

### 2. ELECTIVE COMPONENTS

### 2.1 Cycle of general training

Total cycle 2.1																	
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### 2.2 Cycle of professional training

1	Course II-1	2	1	4	120	64	64	56	4								
2	Course II-2	2	1	4	120	64	64	56	4								
3	Course II-3	3	1	5	150	64	64	86	4								
4	Course II-4	3	1	5	150	64	64	86	4								
5	Course II-5	3	1	5	150	64	64	86	4								
6	Course II-6	4	1	4	120	48	48	72		4							
7	Course II-7	4	1	4	120	48	48	72		4							
8	Course II-7	4	1	4	120	48	48	72		4							
<b>Total cycle 2.2</b>			<b>8</b>		<b>35</b>	<b>1050</b>	<b>464</b>	<b>464</b>		<b>514</b>	<b>8</b>	<b>12</b>	<b>12</b>				
<b>Total elective components</b>			<b>8</b>		<b>35</b>	<b>1050</b>	<b>464</b>	<b>464</b>		<b>514</b>	<b>8</b>	<b>12</b>	<b>12</b>				
<b>Total</b>					<b>120</b>	<b>3600</b>	<b>1064</b>	<b>880</b>		<b>96</b>	<b>88</b>	<b>2554</b>	<b>20</b>	<b>20</b>	<b>16</b>	<b>14</b>	
<b>Total per week</b>													<b>4</b>	<b>4</b>	<b>3</b>	<b>3</b>	
<b>Amount of four-level scale marks</b>													<b>2</b>	<b>3</b>	<b>2</b>	<b>2</b>	
<b>Amount of two-level scale marks</b>													<b>5</b>	<b>5</b>	<b>3</b>	<b>3</b>	
<b>Amount of tests</b>													<b>1</b>	<b>1</b>			
<b>Amount of term research works</b>																	

**Note:**

Four-level evaluation scale: marks "excellent", "good", "satisfactory", "unsatisfactory"

Two-level evaluation scale: marks "passed", "not passed"

### SUMMARY

Title	Amount of ECTS-credits
Compulsory components	<b>85</b>
Elective components	<b>35</b>
Trainings	<b>9</b>
Thesis preparation	<b>9</b>
Research part	<b>42</b>
<b>Total amount of ECTS-credits</b>	<b>120</b>

Approved by the Scientific Council of V.N. Karazin Kharkiv National University  
minutes № 9 dd. 30.05.2022

Dean of School of mathematics and Computer Sciences \_\_\_\_\_  
(signature, surname and initials)

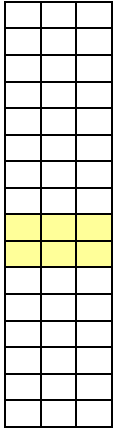
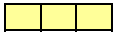
Zholtkevych G.M.

August		
50	51	52
K	K	K

Weeks
6/9 cr

Term
4





III. Schem of Teaching Process  
2022-2024 Teaching Year

Semester		Subject	Credits	Scale
1	1	Global problems of modernity	3	P
	2	Ukrainian as a foreign language	3	P
	3	Algebra II	6	E
	4	Functional analysis II	6	E
	5	Differential geometry of manifolds	6	E
	6	Partial differential equations	6	E
			<b>24</b>	
2	1	Complex analysis II	5	E
	2	Optimization and control theory	5	E
	3	Ukrainian as a foreign language	3	P
	4	E1	4	E
	5	E2	4	E
	6	Master's seminar	3	P
	7	Term scientific research work	6	P
			<b>30</b>	
3	1	E3	5	E
	2	E4	5	E
	3	E5	5	E
	6	Master's seminar	7	P
	7	Term scientific research work	8	P
			<b>30</b>	
4	1	E6	4	E
	2	E7	4	E
	3	E8	4	E
	4	Master's seminar	3	P
	5	Thesis scientific research training (no study leave granted)	9	P
	6	Thesis preparation	6	E
			<b>30</b>	

Scientific part	42
Elective part	31