

“Approved”  
President

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**MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE**

( proprietor )

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

( university )

**EDUCATIONAL PLAN for 2019-2021**

**area of knowledge 11 Mathematics and statistics**

( code and title of area of knowledge )

**Training of Master of Science**

( level of higher education )

**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				August									
	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	50	51	52		
1	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	C	C	C	K	K	K	K	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	C	C	C	K	K	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	C	C	C	K	K	K	K	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T		
3																																																						
4																																																						
5																																																						
6																																																						

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

Year	Theoretical studies	Examinations	Trainings	Certification examination	Thesis preparation	Vacations	Total
1	32	6				14	52
2	28	4			3	4	39
3							
4							
5							
6							
Total	60	10		0	3	18	91

**LEGEND:**

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

**TRAININGS**

Title of training	Term	Weeks
Thesis scientific research training (no study leave granted)	4	6

**CERTIFICATION**

Certification examination	Master's thesis	Term
	Master's thesis	4

Code	COURSES AND RESEARCH WORKS	Terms distribution				Amount of ECTS- credits	Amount of academic hours					Distribution of class hours per week in years and 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	6 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	10	11	12		
		Amount of weeks per term												16	16	16	12											

### 1. COMPULSORY COMPONENTS

#### 1.1 Cycle of general training

1	Global problems of contemporaneity		3				3	90		32				58			2																						
2	Ukrainian as a foreign language	3	1,2	2	3		6	180				96		88	2	2	2																						
<b>Total cycle 1.1</b>				2	3		9	270		32		96		146	2	2	4	0																					

#### 1.2 Cycle of professional training

1	Algebra II	1		1			6	180	64	64				116	4																								
2	Functional analysis II	1		1			6	180	64	64				116	4																								
3	Differential geometry of manifolds	1		1			6	180	64	64				116	4																								
4	Partial differential equations I	1		1			6	180	64	64				116	4																								
5	Complex analysis II	2		1			6	180	64	64				116	4																								
6	Optimization and control theory	2		1			6	180	64	64				116	4																								
7	Master's seminar		3,4				12	360	56				56	304			2	2																					
8	Term scientific research work		1,2,3			3	12	360						360																									
9	Thesis scientific research training (no study leave granted)		4				8	240						240																									
10	Thesis preparation	4					8	240						240																									
<b>Total cycle 1.2</b>				6	2	0	3	76	2280	440	384	0	56	1840	16	8	2	2																					
<b>Total compulsory components</b>				8	2	0	3	85	2550	440	416	96	56	1986	18	10	6	2																					

### 2. ELECTIVE COMPONENTS

## 2.1 Cycle of general training

<b>Total cycle 2.1</b>																						
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## 2.2 Cycle of professional training

1	Course II-1	2	1	6	180	64	64	116	4	4													
2	Course II-2	2	1	6	180	64	64	116	4	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												
<b>Total cycle 2.2</b>			<b>7</b>	<b>35</b>	<b>1050</b>	<b>416</b>	<b>416</b>	<b>634</b>	<b>0</b>	<b>8</b>	<b>12</b>	<b>8</b>											
<b>Total elective components</b>			<b>7</b>	<b>35</b>	<b>1050</b>	<b>416</b>	<b>416</b>	<b>634</b>	<b>0</b>	<b>8</b>	<b>12</b>	<b>8</b>											
<b>Total</b>					<b>120</b>	<b>3600</b>	<b>856</b>	<b>832</b>	<b>96</b>	<b>56</b>	<b>2620</b>	<b>18</b>	<b>18</b>	<b>18</b>	<b>10</b>								
<b>Total per week</b>												<b>18</b>	<b>18</b>	<b>18</b>	<b>10</b>								
<b>Amount of four-level scale marks</b>												<b>4</b>	<b>4</b>	<b>4</b>	<b>3</b>								
<b>Amount of two-level scale marks</b>												<b>2</b>	<b>2</b>	<b>3</b>	<b>2</b>								
<b>Amount of tests</b>												<b>5</b>	<b>5</b>	<b>4</b>	<b>2</b>								
<b>Amount of term research works</b>												<b>1</b>	<b>1</b>	<b>1</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>8</b>
Thesis preparation	<b>8</b>
Research part	<b>40</b>
<b>Total amount of ECTS-credits</b>	<b>120</b>

Approved by the Scientific Council of V.N. Karazin Kharkiv National University  
minutes № 12 dd. November 26, 2018

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

Zholtkevych G.M.