Vice President Vice President Waster of Strates	
Training of Master of Science (level of higher education)	

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

(proprietor)

V.N. Karazin Kharkiv National University

(university)

EDUCATIONAL PLAN for 2023-2024

area of knowledge 10 Life sciences

(code and title of area of knowledge)

speciality	105 "Applied Physics and Nanotechnologies"

(шифр і назва спеціальності)

according to educational-research program ______ "Medical Physics" (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 in 2023/2024 y.e.

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II. TOTAL DAYS FROM THE TIME BUDGET, weeks

Year	Theoretical studies	Examinations	Trainings	Certification examination	Thesis preparation	Vacations	Total	LEGEND: T - theoretical studies
1	32	6				14	52	C - examinations
2	16	2	16		2	3	39	Π - training
Total	48	8	16	0	2	17	91	K - vacations
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// - certification examination

Д - thesis preparation and defence

Level of higher education

the second (Master of Sience) level

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

Educational qualification: master in applied physics and nanomaterials, medical physics

Title of training	Term	Weeks
Intership training (no study leave granted)	3	12
Thesis scientific research training (no study leave gran	4	16

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

ІІІ. ПЛАН НАВЧАЛЬНОГО ПРОЦЕСУ

			Term	s distrib	oution			credits	1.	An	nount of	academi	c hours			Di	strib	utio	n of o		ours terms		veek ir	ı year	s
	-							cre			Cla	ss hours				1 ye	ar	2 yea	ar	3 year	4 ye	ear	5 year	6 ye	ear
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		Four-level evaluation scale	Two-level evaluation scale	Те	abstracts, translations	computational- graphic works	research works	Amount of ECTS-	Tc	Total class hours	Lectures	Laboratory examinations	Practical classes	Seminars	Self-preparation	16	16	16	16						
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3	Methods of medical and biological research	2		21				6	180	80	80	40		_	100	2	5	\dashv	+	+	1	\vdash	+	+	
4	Physical principles of radiotherapy		1, 2	21				6	180	80	32	48	22			12	\rightarrow	\dashv	+	+	+	\vdash	+	+	\vdash
5	Tomography with ionizing radiation	2		21				5	150	64	32		32	_	86 84	-	4	-	+	+	+	\vdash	+	++	\vdash
6	Dosimetry of ionizing radiation		1	11				6	180	96	80	1	16	-		6	\vdash	-	+	+	+	\vdash	+	+	\vdash
7	Physics of biomolecules	1		11				6	180	64	64			 	116 540	4	\vdash	\dashv	+	+	+	\vdash	+	+	
8	Intership training (no study leave granted)		3		-			18	540			-		-		+	\vdash	+	\dashv	+	1			1	\vdash
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	Medical visualization / Methods of biomembrane		1	11	1	y cie (n pro				48	T	16	Π	116	4						П	*	1	Γ
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12	Computational modelling in medicine and biology / Computational analysis of biomolecules	1		11				6	180	64	64				116	4			H	+	-	H	-	+	+
13	Molecular biology and genetics / Methods of bioengineering	2		21				6	180	64	64				116	-	4			\perp	+	\square	+	+	+
14	Physics of biomembranes and bionanotechnologies / Probing nanotechnologies in electronics		2	21				6	180	64	64				116	-	4				+	\square	1	+	-
15	Master's seminar "Medical radiation physics" / Master's seminar "Biomedical nanotechnologies"		3					8	240	96				96	144	_		6			1	\coprod	_	-	1
16	Term scientific research work in Medical radiation physics / Term scientific research work in Biomedical nanotechnologies		3				31	5	150						150										
	Total cycle 2.2	3	3	4	0	0	1	37	1110	352	240	0	16	96	758	8	8	6	0				1	+	+
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Total	
Total per week	120 3600 886 528 48 214 96 2718
Amount of four-level scale marks	24 24 8 0
Amount of two-level scale marks	3 4 1 1
Amount of tests	4 3 3 1
Amount of term research works	6 7 0 0

Note:

Four-level evaluation scale: marks "excellent", "good", "satisfactory", "unsatisfactory" Two-level evaluation scale: marks "passed", "not passed"

Title	Amount of ECTS-
Compulsory components	credits
Elective components	38
Trainings Trainings	37
Thesis preparation	42
Research part	3
Research part	45
Total amount of ECTS-credits	120

Approved by the Scientific Council of V.N. Karazin Kharkiv National University minutes $N_0 29$ dd "29" 05 2023

Director of Educational and Scientific Institute "School of Physics and Technology"_

Pylyp KUZNETSOV

Garant of educational-research program

Valerija TRUSOVA

(signature, surname and initials)

(signature, surname and initials)

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