### MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

National technical university "Kharkiv polytechnic institute"

### APPROVED

The Rector of NTU "KhPI"

\_\_\_\_\_Yevgen SOKOL

«\_\_\_\_»\_\_\_\_20\_\_\_

## EDUCATIONAL AND PROFESSIONAL PROGRAM «MANAGEMENT OF ORGANIZATIONS AND ADMINISTRATION»

The first (bachelor) level of higher education in specialty <u>073 – Management</u> in the field of knowledge <u>07 – Management and Administration</u> qualification <u>Bachelor of Management</u>

> APPROVED BY THE ACADEMIC COUNCIL OF NTU "KhPI"

The Head of the Academic Council \_\_\_\_\_\_/ Leonid TOVAZHNYANSKYI Protocol No\_\_\_\_\_ dated «\_\_\_\_» \_\_\_\_\_ 20\_\_\_

Kharkiv 20\_\_\_

### APPROVAL SHEET for the educational and professional program

Level of higher education

Field of knowledge

Specialty

**Educational program** 

Qualification

First (bachelor)

07 Management and Administration

073 «Management»

Management of Organizations and

Administration

**Bachelor of Management** 

DEVELOPED by the project group in the specialty ''Management'' Guarantor of the educational program

«\_\_\_\_»\_\_\_\_\_

RECOMMENDED

by the Methodological Council of NTU "KhPI" Deputy Head of the Methodological Council

\_\_\_\_Ruslan MYGUSHCHENKO

«\_\_\_\_»\_\_\_\_\_20\_\_\_\_

AGREED Head of the Department of Management and Taxation

**Olena LINKOVA** 

20 p.

AGREED Director of the Institute of Education and Science in Economics, Management and International Business

\_\_\_\_ Nataliia KRASNOKUTSKA

\_\_\_\_Oleksandr MANOYLENKO

\_\_\_\_20\_\_\_. «\_\_\_\_»\_\_\_\_\_

«\_\_\_\_»\_\_\_\_20\_\_

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### **APPROVED AND PUT INTO EFFECT**

by the Order of the Rector of National technical university "Kharkiv polytechnic institute" of «\_\_\_\_» \_\_\_\_20\_  $N_{2}$ \_\_\_.

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### FOREWORD

This program was developed by the project group formed by the departments of management and taxation at the Institute of Education and Science in Economics, Management and International Business of National technical university "Kharkiv polytechnic institute". The project group consisted of :

The Head of the project group (the program guarantor) – Olena Linkova, PhD (Management), associate professor of the department of management and taxation.

The members of the project group:

1. Brin Pavlo – PhD (Management), associate professor of the department of management and taxation.

2. Krasnokutska Nataliia - DSc (Economics & Management), professor, head of the department of management and taxation.

3. Makovoz Oksana - DSc (Economics & Management), professor of the department of management and taxation.

4. Prokhorenko Olena - candidate of economic sciences, associate professor, associate professor of the department of management and taxation.

### I. PROFILE OF THE EDUCATIONAL AND PROFESSIONAL PROGRAM IN SPECIALTY 073 – MANAGEMENT

	IN SPECIALTY 073 – MANAGEMENT
	1 – General information
Full name of higher educational institution and structural unit	National technical university "Kharkiv polytechnic institute"; the institute of education and science in economics, management and international business; the department of management and taxation, the department of international business and finance, the department of innovative entrepreneurship management and international economic relations
The degree of higher education and qualification title	Bachelor, Bachelor of Management
Official name of the educational program Type of diploma and scope of the educational program	The educational and professional program "Management of Organizations and Administration" Unitary, 240 ECTS credits, term of study - 4 years
Availability of accreditation Cycle/level	Certificate НД № 2192162, valid until July 1, 2025 National Qualification Framework (Ukraine) – level 7, EQF LLL –
	Level 6; QF EHEA – First cycle
Prerequisites	Complete secondary education
Language of instruction The period of validity of the educational program	Ukrainian Valid until July 1, 2025
Internet-address of the permanent description of the educational program	http://www.kpi.kharkov.ua
2	2 – The purpose of the educational program
the sphere of managem competencies	pable of solving practical problems and complex specialized tasks in ent of organizations, due to developing a system of professional
3 -	- Characteristics of the educational program
Subject area (field of knowledge, specialty, specialization)	07 Management and Administration 073 Management
Orientation of the educational program	The educational and professional program has a practical orientation. The program's emphasis is on the formation of capabilities for carrying out administrative, entrepreneurial, and analytical activities using modern approaches and methods of managing organizations.
The main focus of the educational program and specialization	Comprehensive general education in specialty 073 «Management». Key words: management, organization, human resource management, strategic management, planning, innovation management, international business

Features of the	The program is based on paradigms, laws, regularities, principles of
	management, and historical background of its development.
program	Specialized subject areas include knowledge of concepts of
	operational, strategic, innovation, personnel and other areas of
	management; functions, methods and techniques of making
	managerial decisions. The program also provides for the possibility
	of training foreign citizens in English
4 – Suitabi	lity of graduates for employment and further training
Suitability for	Graduates can be employed in the following groups of positions
employment	(according to the National classifier of Ukraine: Classification of
	occupations SC 003:2010):
	14. Managers (administrators) of enterprises, establishments,
	organizations and their departments.
	34. Other professionals.
	343. Technical professionals in the sphere of management.
Further training	Graduates can continue their studies at the second (master's) level
	of higher education, as well as can get advanced training and
	acquire additional, post-qualifying education.
Teaching and learning	5 – Teaching and assessment Student-centered teaching in the form of lectures, seminars,
reaching and rearning	practical classes, workshops, consultations. Classroom activities are
	supplemented by students' independent work, preparation of term
	papers based on working with textbooks and scientific periodicals
	and using the Internet resources
Assessment	Rating system of assessment, presentations, project work,
rissessment	examinations, defense of internship reports, public defense of the
	qualification (bachelor's) work.
	6 – Program competencies
Integral competency	The ability to solve complex specialized tasks and practical
	problems characterized by complexity and uncertainty of conditions
	in management sphere or in the learning process, which involves the
	application of theories and methods of social and behavioral
	sciences
Generic competencies	GC01. The ability to realize own rights and responsibilities as a
(GC)	member of society, understand the values of civil (democratic)
	society and the need for its sustainable development, rule of law,
	human and civil rights and freedoms in Ukraine.
	GC02. The ability to maintain and to increase the moral, cultural,
	scientific values and to increase achievements of society by
	understanding the history and patterns of data domain development,
	GC04. The ability to apply knowledge in practical situations.
	GC05. Knowledge and understanding the subject area and
	understanding the professional activity.
	its place in the overall knowledge system about nature and society and in the development of society, techniques and technologies, to use different types and forms of motor activity for recreation and healthy lifestyles. GC03. The ability to abstract thinking, analysis, synthesis. GC04. The ability to apply knowledge in practical situations. GC05. Knowledge and understanding the subject area and

	orally and in writing.
	GC07. The ability to communicate in a foreign language.
	GC08. Skills of information and communication technology usage.
	GC09. The ability to learn and to master modern knowledge.
	GC10. The ability to conduct research at an appropriate level.
	GC11. The ability to adapt and perform in a new situation.
	GC12. The ability to generate new ideas (creativity).
	GC13. The appreciation and respect for diversity and
	multiculturalism.
	GC14. The ability to work in an international context.
	GC15. The ability to act on the basis of ethical grounds (reasons).
Professional (specialty-	SC01. The ability to identify and describe the characteristics of
specific) competencies	organizations.
(SC)	C
(50)	SC02. The ability to analyze the results of organization activity, to
	compare them with the factors of the external and internal
	environment.
	SC03. The ability to identify prospects of organization
	development.
	SC04. The ability to determine the functional areas of the
	organization and the relationships between them.
	SC05. The ability to manage the organization and its units through
	the management functions realization
	SC06. The ability to act socially responsible and consciously.
	SC07. The ability to choose and to use modern tools of
	management.
	SC08. The ability to plan the organization activity and to manage
	the time.
	SC09. The ability to work in a team and to establish interpersonal
	interaction in solving professional tasks.
	SC10. The ability to assess the performed works, to ensure their
	quality, and to motivate the staff of the organization.
	SC11. The ability to create and manage effective communication in
	the process of management.
	SC12. The ability to analyze and structure the problems of an
	organization, to form reasonable decisions.
	SC13. To understand the principles and rules of law and to use them
	in a professional activity.
	SC14. To understand the principles of psychology and use them in a
	professional activity.
	SC15. The ability to form and demonstrate leadership and
	behavioral skills.
Professional (specialty-	SC1.1. Ability to collect and process primary accounting and
specific) competencies	management information; understand and be able to apply
for optional block 01	accounting and auditing systems
	SC1.2. Ability to formulate the main tasks associated with the
	implementation of risk management in the organization
<u> </u>	SC1.3. Understand the principles of business ethics and use them in

	professional activities
Professional (specialty-	SC2.1. Ability to collect and process primary accounting and
specific) competencies	management information in the service sector
for optional block 02	SC2.2. Ability to formulate the main tasks related to teamwork in IT
	organizations
	SC2.3. Understand the principles of professional activity of a
	manager in the IT field
	7 – Program learning outcomes
Specialty-specific	LO 01. To know the rights and duties as a member of society, be
program learning	aware of the values of civil society, the rule of law, human and civil
outcomes	rights, and freedoms in Ukraine.
	LO 02. To keep moral, cultural, scientific values and to increase
	achievements of society, to use different types and forms of
	effective activity for maintaining a healthy lifestyle.
	LO 03. To demonstrate knowledge of theories, methods, and
	functions of management, modern concepts of leadership.
	LO 04. To show skills of identification of problems and justification
	of management decisions.
	LO 05. To describe the content of the functional areas of the
	organization
	LO 06. To show skills of search, collecting, and analysis of
	information, calculation of indicators to substantiate management
	decisions.
	LO 07. To show skills of organizational planning.
	LO 08. To apply management methods to ensure the effectiveness
	of the organization.
	LO 09. To demonstrate skills of interaction, leadership, and
	teamwork.
	LO 10. To have the skills to substantiate effective tools for
	motivating the staff of the organization.
	LO 11. To demonstrate the skills of analyzing the situation and
	communicating in various areas of the organization's activities.
	LO 12. To evaluate the legal, social, and economic implications of
	an organization's functioning.
	LO 13. To communicate in an oral and written form in the state and
	foreign languages.
	LO 14. To identify the stress reasons, to adapt yourself and
	members of the team to a stressful situation, to find means to its
	neutralization.
	LO 15. To show the ability to act socially responsible and socially consciously on the basis of ethical reasons (motives), respect for a
	consciously on the basis of ethical reasons (motives), respect for a
	variety and interlevel of culture.
	LO 16. To demonstrate skills of independent work, flexible
	thinking, openness to new knowledge, be critical and self-critical.
	LO 17. To conduct research individually and/or in a group under the
Program learning	leadership of the leader.LO1.1. Develop an operational strategy, calendar plans, organize
Program learning	LOT.1. Develop an operational strategy, calential plans, organize

	1											
outcomes for optional block 01	operational activities, effectively manage the resources and stocks											
DIOCK UI	of the organization											
	LO1.2. Explain the general principles and patterns of integrated											
	management of material, information, financial and other flows											
	LO1.3. Form and analyze management and tax reporting of											
	enterprises and correctly interpret the information obtained for											
	management decisions											
	LO1.4. Demonstrate skills in risk analysis, identification and											
	assessment											
Program learning	LO2.1. Demonstrate skills in the use of information technology											
outcomes for optional	processing, storage and transmission of data, determine the											
block 02	principles and life cycle of software development											
	LO2.2. Demonstrate skills to justify management decisions using											
	information technology and systems											
	LO2.3. Demonstrate knowledge of project management											
	methodologies; conduct project analysis; define project goals and											
	results											
	LO2.4. Define e-business models; use software tools for the											
	implementation of Internet projects; perform site optimization for											
0.0	search engines											
	rce support for the implementation of the program											
Personnel support	Meets the staffing requirements related to conducting educational											
	activities in the sphere of higher education in accordance with											
	current legislation of Ukraine (the Resolution of the Cabinet of											
	Ministers of Ukraine "On approval of the licensing conditions for											
	conducting educational activities of educational institutions" of											
	December 30, 2015, № 1187 (with the changes introduced in											
	accordance with the Resolution of CM № 347 of 10.05.2018)											
Material and technical	Meets the technical requirements related to the material and											
support	technical base of educational activities in the sphere of higher											
	education in accordance with current legislation of Ukraine (the											
	Resolution of the Cabinet of Ministers of Ukraine "On approval of											
	the licensing conditions for conducting educational activities of											
	educational institutions" of December 30, 2015, № 1187 (with the											
	changes introduced in accordance with the Resolution of CM №											
	347 of 10.05.2018)											
Informational support	Meets the technical requirements regarding informational support											
and availability of	and availability of instructional materials for educational activities											
	in the sphere of higher education in accordance with current											
instructional materials	legislation of Ukraine (the Resolution of the Cabinet of Ministers of											
	Ukraine "On approval of the licensing conditions for conducting											
	educational activities of educational institutions" of December 30,											
	2015, $\mathbb{N}_{2}$ 1187 (with the changes introduced in accordance with the Passelution of CM $\mathbb{N}_{2}$ 347 of 10.05 2018)											
	Resolution of CM № 347 of 10.05.2018)											
National Credit	9- Academic mobility											
	Academic mobility is based on bilateral agreements between the											
Mobility	National technical university "Kharkiv polytechnic institute" and											
	other Ukrainian higher educational institutions											
International Credit	Academic mobility is based on bilateral agreements between											

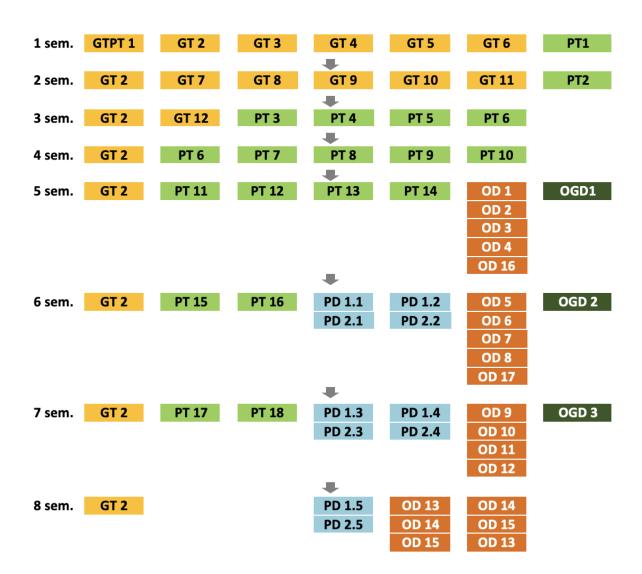
Mobility	National technical university "Kharkiv polytechnic institute" and Miskolc University (Hungary), Maribor University (Slovenia), Otto von Guericke University Magdeburg (Germany), University of Szczecin (Poland)
Training of foreign applicants for higher education	Students are offered the opportunity to study in English.

# 2. The list of components of the educational and professional program

Code	Components of the educational program	Number	Form of final
		of credits	assessment
1	2	3	4
	Obligatory components of EP		
OT 1	General training	1.0	Г
GT 1	History of Ukraine and Ukrainian culture	4,0	Exam
GT 2	Ukrainian Language	3,0	Exam
GT 3	Foreign Language *	16,0	Exam
GT 4	Philosophy	3,0	Exam
GT 5	Jurisprudence	4,0	Credit
GT 6	Economic Theory	5,0	Exam
GT 7	Higher Mathematics	6,0	Exam
GT 8	Fundamentals of Entrepreneurship	5,0	Credit
GT 9	Economic Informatics	5,0	Exam
GT 10	Microeconomics	5,0	Exam
GT 11	Economic Statistics	4,0	Exam
GT 12	Macroeconomics	5,0	Exam
GT	Physical Education	12,0	Credit
	1.2. Professional training		I
PT 1	Introduction to Speciality (Introductory practice)	3,0	Credit
PT 2	Theory of Organization	5,0	Credit
PT 3	Finance	6,0	Exam
PT 4	Enterprise Economics	6,0	Exam
PT 5	Marketing	5,0	Exam
PT 6	Fundamentals of Management	8,0	Exam
PT 7	Operational Management	6,0	Exam
PT 8	International Business	5,0	Exam
PT 9	Human Resource Management	6,0	Exam
PT 10	Accounting	5,0	Credit
PT 11	Organizational Behavior	4,0	Exam
PT 12	Self-management	4,0	Exam
PT 13	Fundamentals of Financial Management	4,0	Exam
PT 14	Innovation Management	5,0	Exam
PT 15	Information Technology in Management	3,0	Exam
	Performance Management		
PT 16	<u> </u>	5,0	Exam
PT 17	Strategic Management	5,0	Exam
PT 18	Practical Training	6,0	Credit
PT 19	Pre-graduation Practice	6,0	Credit
	Attestation <sup>+</sup>	6,0	
	Total amount for obligatory components	180	

	Optional educational components		
	2.1. Profile training		
	Profiled discipline package 01 "Management in the pro-	oduction sphere"	
OP1.1	Resource management	4,0	Exam
OP1.2	Management decisions	5,0	Exam
OP1.3	Management and tax accounting	4,0	Exam
OP1.4	Production logistics	5,0	Exam
OP1.5	Quality management	6,0	Exam
	Profiled discipline package 02 "IT manage	ment''	
OP2.1	Introduction to computer science	4,0	Exam
OP2.2	Decision making in IT business	5,0	Exam
OP2.3	Fundamentals of project management	5,0	Exam
OP2.4	Team management tools	4,0	Exam
OP2.5	E-business	6,0	Exam
	2.2 Optional student disciplines of the profile preparation	according to the	list
OPT1	Fundamentals of business analysis	5,0	Credit
OPT2	Econometrics	5,0	Credit
OPT3	The tax system	5,0	Credit
OPT4	Business planning	5,0	Credit
OPT5	Mathematical modeling in management	5,0	Credit
OPT6	Technology management	5,0	Credit
OPT7	Basics of taxation	5,0	Credit
OPT8	Investment	5,0	Credit
OPT9	Crisis management	5,0	Credit
OPT10	Leadership	5,0	Credit
OPT11	Business evaluation	5,0	Credit
OPT12	Insurance management	5,0	Credit
OPT13	Risk management	5,0	Credit
OPT14	SMM management	5,0	Credit
OPT15	Securities Market	5,0	Credit
OPT16	Ecology	5,0	Credit
OPT17	Fundamentals of Occupational Safety and Health	5,0	Credit
	2.3. Optional student disciplines from the general university		
O <b>D</b> 1	Optional discipline 1	4,0	Credit
O <b>D</b> 2	Optional discipline 2	3,0	Credit
O <b>D</b> 3	Optional discipline 3	4,0	Credit
	Total amount for optional components	60	
	TOTAL AMOUNT FOR THE EDUCATIONAL	240	
	PROGRAM		

# 3. STRUCTURAL-LOGICAL SCHEME OF THE EDUCATIONAL PROGRAM



### 4. ALLOCATION OF THE CONTENT OF THE EDUCATIONAL PROGRAM AMONG GROUPS OF COMPONENTS AND TRAINING CYCLES

		Academic load	on applicants for higher edu (credits / %)	cation
N⁰	Training cycle	Obligatory components	Optional components of	Total number
		of the educational and	the educational and	for the entire
		professional program	professional program	period of study
1	2	3	4	5
1	General training	77 /32	11/5	77 / 32
	cycle	11/52	11/J	11/32
2	Professional and			
	practical training	103 / 43	49 / 20,4	163/ 68
	cycle			
	number for the entire period of study	180 / 75	60 / 25	240 / 100

### 5. FORM OF CERTIFICATION OF APPLICANTS FOR HIGHER EDUCATION

Certification of graduates of the educational program in specialty 073 «Management» is carried out in the form of a public defense of the qualification work and ends with the issuance of the document of a standard form on awarding a Bachelor's degree and the qualification "Bachelor of Management".

The attestation takes place openly and publicly.

# 6. Matrix of correspondence between program competencies and components of the educational program

	GT 1	GT 2	GT 3	GT 4	GT 5	GT 6	GT 7	GT 8	GT 9	GT 10	GT 11	GT 12	GT	PT 1	PT 2	PT 3	PT 4	РТ 5	PT 6	PT 7	PT 8	PT 9	РТ 10	РТ 11	PT 12	РТ 13	РТ 14	РТ 15	РТ 16	РТ 17	РТ 18	РТ 19
		2	3			U	/	0	,	10	11	12		1	2	3	-	3	U		0	9	10	- 11	12	15	14	15	10	1/	10	19
GC01	+			+	+															+												
GC02	+			+	+								+																			
GC03				+		+	+		+	+	+	+			+	+	+	+	+	+		+	+	+	+	+	+	+	+	+		
GC04								+	+		+	+			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
GC05						+		+	+	+		+			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
GC06		+																													+	+
GC07			+																		+											
GC08			+						+																			+				
GC09	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		+		
GC10											+	+					+	+				+										+
GC11		+												+				+	+			+		+	+		+			+		
GC12								+						+				+									+			+		
GC13			+																		+	+		+								
GC14			+																		+											
GC15								+						+	+			+	+			+		+								
SC01														+	+		+	+	+				+	+		+			+	+	+	+
SC02															+	+		+	+		+						+		+	+	+	+
SC03																		+	+								+		+	+		+
SC04															+	+	+		+										+	+	+	+
SC05																			+	+									+	+		+
SC06																		+	+			+		+					+	+		
SC07																			+			+	+	+		+		+	+	+		
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SC12																	+		+	+									+			
SC13					+																	+										
SC14																						+			+							
SC15																						+		+	+							

	OP 1.1	OP 1.2	OP 1.3	OP 1.4	OP 1.5	OP 2.1	OP 2.2	OP 2.3	OP 2.4	OP 2.5	OPT 1	OPT 2	OPT 3	OPT 4	OPT 5	OPT 6	OPT 7	OPT 8	OPT 9	OPT 10	OPT 11	OPT 12	OPT 13	OPT 14	OPT 15	OPT 16	OPT 17
GC01		1.2	1.5	1.1	+	2.1	2.2	2.5	2.1	2.0	1		+	+	5	0	+		+	10		12	15	11	+	10	17
GC02																										+	+
GC03	+			+		+					+	+		+	+								+				
GC04	+			+					+		+	+		+		+		+	+	+	+	+		+			
GC05	+								+	+	+			+					+	+				+			
GC06									+											+				+			
GC07									+	+										+							
GC08		+				+	+		+				+				+	+					+	+	+		
GC09	+					+				+	+			+		+					+	+	+	+			
GC10	+				+									+	+	+					+						
GC11		+					+							+						+	+	+	+				
GC12		+					+	+										+		+							
GC13									+					+						+							
GC14														+										+			
GC15																				+						+	+
SC01	+				+									+								+		+			
SC02			+	+	+					+	+	+	+				+	+	+		+	+	+		+		
SC03		+					+	+		+	+			+				+	+		+	+					
SC04	+				+					+	+			+								+					
SC05																+											
SC06										+				+						+						+	+
SC07				+		+			+	+		+		+						+				+			
SC08		+	+	+			+	+				+		+		+		+									
SC09		+					+						+		+					+					+		
SC10		+	+	+	+		+	+				+	+	+									+		+		
SC11								+	+					+										+			
SC12		+					+	+			+								+								
SC13													+	+			+		+						+	+	+
SC14														+					+	+	+						
SC15																				+							
SC 1.1		+	+					+	+					+			+							+			
SC 1.2	+	+		+	+																						
SC 1.3		+			+				+					+										+			
SC 2.1.			+			+	+	+		+			+	+								+			+		
SC 2.2.			+				+	+	+				+	+				+			+		+		+		
SC 2.3.				+			+											+			+		+				

## Table 6 (continued). Matrix of correspondence between program competencies and components of the program

### 7. Matrix of correspondence between program learning outcomes (LO) and components of the educational program

	GT 1	GT 2	GT 3	GT 4	GT 5	GT 6	GT 7	GT 8	GT 9	GT 10	GT 11	GT 12	GT	PT 1	PT 2	PT 3	PT 4	PT 5	PT 6	PT 7	PT 8	PT 9	PT 10	PT 11	PT 12	PT 13	PT 14	РТ 15	PT 16	PT 17	PT 18	PT 19
LO 1					+			+																								
LO 2	+			+									+											+								
LO 3														+					+			+		+	+	+	+	+	+	+		
LO 4									+													+		+	+	+	+	+	+	+	+	+
LO 5														+	+		+	+	+			+				+	+		+	+	+	+
LOI 6									+		+					+	+		+	+			+			+		+			+	+
LO 7								+															+	+								+
LO 8																				+		+				+			+	+	+	+
LO 9														+								+										
LO 10																			+			+										
LO 11																					+	+		+								
LO 12						+				+		+												+		+			+			
LO 13		+	+													+	+				+	+		+							+	+
LO 14																						+		+								
LO 15								+										+														
LO 16	+	+	+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+	+	+		+	+	+	+	+	+	+	+
LO 17																								+	+		+		+	+	+	+

cuucano	iiui	<b>P1 75</b>	, am																								
	OP 1.1	OP 1.2	OP 1.3	OP 1.4	OP 1.5	OP 2.1	OP 2.2	OP 2.3	OP 2.4	OP 2.5	OPT 1	OPT 2	OPT 3	OPT 4	OPT 5	OPT 6	OPT 7	OPT 8	OPT 9	OPT 10	OPT 11	OPT 12	OPT 13	OPT 14	OPT 15	OPT 16	OPT 17
LO 1	+												+	+			+		+								
LO 2					+																					+	+
LO 3					+																				+		
LO 4		+		+	+		+	+	+		+	+		+	+				+	+		+			+		
LO 5					+									+					+					+	+		
LO 6		+	+	+	+	+	+	+		+	+	+		+	+	+		+	+		+	+	+	+	+		
LO 7	+	+	+				+	+		+				+				+			+						
LO 8				+					+	+					+	+				+	+	+			+	+	+
LO 9	+	+					+	+	+				+	+					+	+	+				+		
LO 10		-		+				-	+					+					+	+	+	+	+				
LO 11								+	+		+			+					+								
LO 12		+					+		+	+	+		+				+	+			+	+	+	+	+		
LO 13						+			+															+			
LO 14			+						+				+														+
LO 15	+								+											+		+		+			
LO 16	+	+	+			+	+			+	+		+	+	+	+	+	+			+		+	+	+		
LO 17			+			+		+	+		+											+	+	+			
LO 1.1	+				+																						
LO 1.2	+			+	+																						
LO 1.3		+	+																								
LO 1.4		+		+																							
LO 2.1						+							+														
LO 2.2							+						+		+				+								
LO 2.3								+																			
LO 2.4										+			+														

# Table 7 (continued). Matrix of correspondence between program learning outcomes (PO) and components of the educational program