

**LIMITED LIABILITY COMPANY
"HIGHER EDUCATIONAL INSTITUTION
"AMERICAN UNIVERSITY KYIV"**

APPROVED

By the Academic Council
LLC «Higher Educational Institution»
«American University Kyiv»
Minutes № 3 dated 19.03.2025

Put into effect

By order of the Rector
LLC «Higher Educational Institution»
«American University Kyiv»
№ 12-OD dated 19.03.2025

**EDUCATIONAL AND PROFESSIONAL PROGRAM
"SOFTWARE ENGINEERING"**

Higher education level:	Second (Master's)
Higher Education Degree:	Master
Field of knowledge:	F Information Technology
Speciality:	F2 Software Engineering

(with amendments)

Kyiv, 2025

1. Preamble

Developed in accordance with the standard of higher education of Ukraine in the specialty 121 Software Engineering for the second (master's) level of higher education, approved by the order of the Ministry of Education and Science of 17.11.2020, No 1424

Composition of the development group:

Surname, first name, patronymic	Academic degree, academic title, position
<i>Development team:</i>	
Putrenko Viktor	Doctor of Technical Sciences, Senior Researcher, Professor of the Department of Information Technologies
Didkovska Maryna	Candidate of Technical Sciences, Associate Professor, Associate Professor of the Department of Information Technologies
Tytenko Serhyi	Candidate of Technical Sciences, Associate Professor, Associate Professor of the Department of Information Technologies

Reviews and reviews of external stakeholders:

1. Viktor OSTAPCHUK, Head of the Institute of Telecommunications and Informatization named after the Heroes of Kruty, Major General.
2. Tetiana KADATSKA., Acting Head of the Kyiv NSC SWITZ.
3. Serhiy ROZHOK, General Director of EPAM SYSTEMS LLC.

CHANGES IN THE EDUCATIONAL PROGRAM

No/date of the minutes of the Academic Council	No/date of the order on enactment	Changes to the educational program
No. 5 dated May 31, 2023	18-OD dated June 14, 2023	- The term of study has been changed from 1.4 years to 1.5 years starting from 2023 of admission; -The name of the educational component of GEN 100 "Professional English" has been changed to the name of GEN 100 "Academic and professional communication".
No. 5 of May 13, 2024	19-OD dated May 13, 2024	- The term of study has been changed from 1.5 years to 1.9 years starting from 2024; - The educational component (OK) GEN 500 "Academic and Professional Communication" (6 ECTS credits) has been changed to OK GEN 501 "Academic and Professional Communication" (3 ECTS credits); - OK SDT 580 "Research Seminar: Digital Technologies" (3 ECTS credits) was approved; - The name of OK SDT 598 "Practice on the topic of master's qualification work MSE" was changed to the name of SDT 598 "Industrial practice MSE"; - OK SDT 599 "MSE Qualification Work" (6 ECTS credits) has been changed to the educational component SDT 599 "Preparation of MSE Qualification Work" (5

		ECTS credits) and SDT 599-D "Defense of MSE Qualification Work" (1 ECTS credits).
No. 14 of December 19, 2024	46-OD dated December 19, 2024	In connection with the change in the "List of fields of knowledge and specialties in which applicants for higher and professional pre-higher education are trained" dated August 30, 2024, No. 1021 Kyiv, the Code and name of the field of knowledge were changed to "F Information Technologies" and the Code and name of the specialty to "F2 Software Engineering"
№. 3 on March 19, 2025	12-OD dated March 19, 2025	Changed the form of education from «full-time and part-time» to «full-time (day, evening)» for students of 2025 admission

2. General characteristics

Full name of the institution and structural Unit	Limited Liability Company "Higher Educational Institution "American University Kyiv"
Full name of the structural unit	EPAM Faculty of Digital Technologies
Higher education level	Second (Master's)
Higher education degree and qualification name	Master. Master of Science in Software Engineering
Name of the field of knowledge	F Information Technology
Name of specialty	F2 Software Engineering
Official name of the educational and professional program	Software Engineering
Type of diploma and scope of educational and professional Program	Master's Degree, Single, 90 ECTS Credits
Availability of accreditation	National Agency for Quality Assurance in Higher Education, Ukraine Accreditation Certificate No 14796 Educational and Professional Program "Software Engineering" in the specialty F2 Software Engineering Expires on July 01, 2030.
Language(s) of instruction	Ukrainian, English
Form of education	full-time (daytime, evening)
Term of education	1 year 9 months
Internet address of permanent placement of the description of educational and professional Program	https://auk.edu.ua
Cycle/Level	NQF – Level 7, FQ-EHEA – Second Cycle, EQF LLL – Level 7
Requirements for the level of persons who can start	Bachelor's degree or master's degree (OCR specialist)

training in the educational field Program	
Purpose of the educational program	<p>The purpose of the educational program is to train highly qualified specialists of international level, in the field of software engineering, who are able to effectively apply the unique knowledge and skills of a software engineer or software designer, who can effectively use agile approaches and innovative development methods in the field of software engineering and the implementation of IT products for business management.</p>
Subject area	<p>Object of study: there are processes of development, design, modification, analysis, quality assurance, implementation and maintenance of software.</p> <p>Learning objectives: training of specialists who are able to solve complex tasks and problems in the development, quality assurance, implementation and maintenance of software and information systems, which involves research and/or implementation of innovative developments and is characterized by uncertainty of conditions and requirements for it.</p> <p>Theoretical content of the subject area: basic mathematical, infological, linguistic, economic conceptual provisions for the development and maintenance of software and ensuring its quality</p> <p>Methods, techniques, technologies and tools:</p> <ul style="list-style-type: none"> – methods of analysis and modeling of the application area, identification of information needs, classification and analysis of data for software design; – methods for developing software requirements; – methods of analysis and construction of software models; methods of design, construction, integration, testing and verification of software; – methods for modifying software components and data; – models and methods of reliability and quality in software engineering; Software project management methods. <p>Tools and equipment: Software, Hardware, and Cloud ToolsSupportProcesses Engineering Software.</p>

Orientation of the educational and professional program	Educational and professional for master's degree;
The main focus of the educational and professional program and specialization (if any)	The main focus of the educational program focuses on education and professional training in computer systems software engineering. This is ensured by combining classic academic university teaching and participation in practical IT projects. Tags: software engineering, development, analysis, modeling, software quality, software architecture
Features of the educational and professional program	The OP allows you to acquire the basic competencies of a high-level technical specialist, who is not only versed in modern technological solutions and tools, but can also manage a team of other specialists and establish appropriate technological production processes, i.e. play the role of a software architect, software testing architect, head of development teams, and technical leader of complex projects in the IT industry. The program is unique because it is based on the experience of forming and teaching similar programs at the world-class university Arizona State University (ASU). The program is focused on attracting the best specialists in the field to the educational process: practitioners and experts from domestic and American higher education institutions, attracting students to international academic mobility programs and double degree programs in teaching in Ukrainian and English
Employment of graduates	The field of professional activity is the development of software products, technologies and software development tools, scientific research, teaching, expert and consulting activities in the field of software engineering. Employment is possible in IT companies and other enterprises and perform work related to software development, implementation of innovative projects and scientific activities. According to the National Classifier of Professions DK 003:2010, graduates can work in the following professions: 2131 Computing professionals including: 2131.2 Computer Developers 2132 Programming professionals Including: 2132.2 Computer program developers 2132.2 Application Programmer 2132.2 Software Engineer
Further training	A master can continue his studies at the third (educational and scientific) level of higher education. Acquisition of additional qualifications in the adult education system, continue lifelong learning in accordance with the current legislation.
3. Teaching and Assessment	
Teaching and learning	Learning approaches: student-centered learning; Self-study; Professionally-oriented training. A combination of traditional and non-traditional teaching methods: lectures, including with the participation of practitioners; practical classes, seminars, presentations; solving problems, solving computational problems; conducting a consultation with teachers. A special type of classes is the format of group classes, during which students receive a business case and form architectural solutions for software development for it (architectural executions).

Evaluation	The final assessment of knowledge is carried out on a 100-point scale and on a national scale. Forms of control are determined for each educational component of the program.
4. List of competencies of the graduate	
Integral Competence (IC)	The ability of a person to solve complex tasks and problems in a certain field of professional activity or in the process of learning
General Competencies (GC)	ZK 01. Ability to abstract thinking, analysis and synthesis. ZK 02. Ability to communicate in a foreign language both orally and in writing. ZK 03. Ability to conduct research at an appropriate level. ZK 04. Ability to communicate with representatives of other professional groups of different levels (with experts in other fields of knowledge/types of economic activity). ZK05. Ability to generate new ideas (creativity). ZK 06. Ability to improve your skills based on the analysis of previous experience.
Special (professional) competencies of the specialty	SK 01. Ability to analyze subject areas; form, classify software requirements. SK 02. Ability to develop and implement scientific and/or applied projects in the field of software engineering. SK 03. Ability to design software architecture, simulate the processes of functioning of individual subsystems and modules. SK 04. Ability to develop and implement new competitive ideas in software engineering. SK 05. Ability to develop, analyze and apply specifications, standards, rules and recommendations in the field of software engineering. SK 06. Ability to effectively manage human, technical, and other project resources in the field of software engineering. SK 07. Ability to critically reflect on problems in the field of information technology and at the edge of fields of knowledge, integrate relevant knowledge and solve complex problems in broad or multidisciplinary contexts. SC 08. Ability to develop and coordinate processes, stages and iterations of the software life cycle based on the application of modern models, methods and technologies of software development. SK 09. Ability to ensure software quality. SC 10. Ability to perform the duties of a technical leader who manages the processes of discussing and collecting technical and business requirements for the developed software system at the level of communication with the top management of stakeholder organizations. SC 11. Ability to perform the duties of a technical manager, head of engineering departments, architect of software solutions, technical director who manages, general supervision, consulting and implementation of the processes of building complex software solutions in accordance with the business needs of the customer enterprise. SC 12. Ability to form requirements and develop components of information systems for mining and visualization of data sets
5. The normative content of the training of higher education applicants, formulated in terms of learning outcomes	

<p>Program Learning Outcomes (RN)</p>	<p>PH 01 Know and apply modern professional standards and other regulatory documents in software engineering.</p> <p>PH 02 Evaluate and select effective methods and models for the development, implementation, maintenance of software and management of relevant processes at all stages of the life cycle.</p> <p>PH 03 Build and investigate models of information processes in the applied field.</p> <p>PH 04 Identify information needs and classify data for software design.</p> <p>RN 05. Develop, analyze, justify and systematize software requirements.</p> <p>PH 06 Develop and evaluate software design strategies; substantiate, analyze and evaluate options for design solutions in terms of the quality of the final software product, resource constraints and other factors.</p> <p>PH 07 Analyze, evaluate and apply modern software and hardware platforms at the system level to solve complex software engineering problems.</p> <p>PH 08 Develop and modify software architecture to meet customer requirements.</p> <p>RN 09. Reasonably choose programming paradigms and languages for software development; apply modern software development tools in practice.</p> <p>PH 10 Modify existing and develop new algorithmic solutions for detailed software design.</p> <p>PH 11 Ensure quality at all stages of the software life cycle, including using relevant models and assessment methods, as well as automated testing and verification tools.</p> <p>RN 12 Make effective organizational and managerial decisions in conditions of uncertainty and changes in requirements, compare alternatives, assess risks.</p> <p>PH 13 Configure software, manage its changes and develop software documentation at all stages of the life cycle.</p> <p>PH 14 Predict the development of software systems and information technologies.</p> <p>PH 15 Carry out software reengineering in accordance with customer requirements.</p> <p>PH 16 Plan, organize and carry out testing, verification and validation of software.</p> <p>PH 17 Collect, analyze, evaluate the information necessary for solving scientific and applied problems, using scientific and technical literature, databases and other sources.</p> <p>PH 18 Be able to manage the development team and carry out general supervision over the implementation of the processes of building complex software solutions.</p> <p>PH 19. Be able to form, document and coordinate with the client a general technical solution for a software product.</p> <p>PH 20. Analyze and visualize large data sets using data mining techniques and development application libraries.</p> <p>PH 21. Develop complex information systems and software solutions for visualization and analysis of big data.</p> <p>PH 22. Be able to independently select the necessary tools and develop a solution concept based on modern technologies , scientific and technical literature, databases and other sources.</p>
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6. Form of attestation of applicants for higher education

Forms of attestation of applicants for higher education Education	Attestation is carried out in the form of public defense of the qualification work.
Requirements for qualification work	<p>The qualification work should solve a complex problem or problem of software engineering and involve research and/or innovation.</p> <p>The qualification work must not contain academic plagiarism, fabrication, falsification.</p> <p>The qualification work must be published on the official website of the higher education institution or its subdivision, or in the repository of LLC "Higher Educational Institution "American University Kyiv".</p>
Requirements for public protection (demonstration)	The defense of the master's qualification work is carried out openly and publicly using a presentation developed in Microsoft Office Power Point (the number of slides is at least 10).
7. Resource provision and academic mobility	
Staffing	<p>Scientific and pedagogical workers who ensure the implementation of the educational and professional program have scientific degrees and/or academic titles; in terms of qualifications, they correspond to the profile and direction of the disciplines taught; have the necessary experience of scientific, scientific and pedagogical and practical work experience.</p> <p>Professionals with experience in research, management, innovation, creative and professional work, who have successful business results and relevant education, are also involved in teaching academic disciplines.</p>
Logistics	<p>The educational process according to the educational program takes place in specialized classrooms equipped with audiovisual equipment and the necessary technical means. The areas and material and technical support of all departments involved in ensuring the educational process under the program are used.</p> <p>The library catalog of printed educational publications is available at the link https://opac.auk.edu.ua/. However, the book supply of educational, research and reference literature for MSE educational programs is based not only on printed publications, but also on licensed electronic resources. The library provides its users with free access to the licensed content of the world's best resources in the field of IT and business, which is provided in the 24/7 mode. Recommended sources from the syllabuses of educational components are fully provided by the following platforms: Research4Life, ProQuest Ebook Central (Part of Clarivate), O'Reilly Media, JSTOR, ACM(DL). Internet access.</p>
Informational and educational support	<p>The official website of the educational institution https://auk.edu.ua contains information about educational programs, educational, scientific and organizational activities, structural units, admission rules, contacts, etc.</p> <p>Applicants for higher education under the educational program can use the databases of the information and reference system "ProQuest", the network "Cengage PH", access to "SAGE Publication", library software "Koha" and "ProQuest". Access</p>

	<p>to all library bases is provided through students' university accounts.</p> <p>Students and teachers can use the library fund and use methodological material prepared by teachers and posted in LMS Canvas: materials from textbooks, presentations on lectures, methodological instructions for practical, seminar classes, individual tasks, etc. Methodological material can be provided both in printed form and in electronic form. The AUC Library provides its users with free access to licensed content of the world's best resources in the field of IT and business, which is provided 24/7. Recommended sources from the syllabuses of educational components are fully provided by the following platforms: Research4Life, ProQuest Ebook Central (Part of Clarivate), O'Reilly Media, JSTOR, ACM(DL). Access to the databases of scientific periodicals, which are necessary for individual research, for students and teachers of AUC is free and possible from any digital device. These are about 500 titles of journals in the thematic area of the archive mostly before 1995 (Research4Life, JSTOR) and 177,500 journal articles on scientific and technical topics in the ACM(DL) database.</p> <p>The methodological material is periodically updated and adapted to the goals of the educational program. system for remote monitoring of academic integrity and proctoring of exams and milestone unit control (current testing) LockDown Browser, Respondus Monitor. Full online access of students and teachers to the family of modern IntelliJ IDEA IDEs.</p>
<p>National Credit Mobility</p>	<p>National credit mobility can be carried out in accordance with the agreements of the University with other higher education institutions of Ukraine and implemented by applicants for higher education under the educational program in higher education institutions (scientific institutions) – partners of the university within Ukraine</p>
<p>International Credit Mobility</p>	<p>International credit mobility can be implemented by applicants for higher education in educational programs in accordance with the agreements concluded with partners of the University outside Ukraine.</p> <p>International academic mobility is implemented on the basis of partnership with the main partner of the university – Arizona State University.</p>
<p>Training of foreign applicants for higher education</p>	<p>Anticipated</p>

8. Explanatory note

Table 1/Table 1

List of components of the educational and professional program

Code/ Code	The name of the educational component (academic discipline, types of practice, qualification	A few hundred chalks - Number of ECTS credits	Final control form
ОБОВ'ЯЗКОВІ КОМПОНЕНТИ / CORE COURSES			
1. Cycle of general training		12	
SBA 500	Професійна ефективність / Professional Effectiveness	6	Exam
GEN 501	Академічне та професійне спілкування / Academic and Professional Communication	3	Differentiated scoring
SDT 580	Дослідницький семінар: Цифрові технології / Research Seminar: Digital Technologies	3	Differentiated scoring
2. Cycle of core professional training		36	
SDT 502	Проектування та архітектура програмного забезпечення/ Software Design and Architecture	6	Exam
SDT 501	Software engineering: Principles and Concepts	6	Exam
SDT 503	Software Verification, Validation and Testing	6	Exam
SDT 505	Візуалізація даних / Data Visualization	6	Exam
SDT 504	Software Project, Process and Quality Management	6	Exam
SBA 551	Technology Entrepreneurship	6	Exam
3. Cycle of core practical training		12	
SDT 598	Internship MSE/Internship MSE	12	Differentiated scoring
4. Attestation of higher education students		6	
SDT 599	Preparation of the qualification work MSE / Capstone Project MSE	5	Differentiated scoring
SDT 599-D	Capstone Project MSE Defense	1	Differentiated Differentiated defense
Загальна кількість кредитів ЄКТС обов'язкових компонентів / Total ECTS Credits of Core Courses		66	
ВИБІРКОВІ КОМПОНЕНТИ / ELECTIVE COURSES			
5. Cycle of general elective training Catalog 1		6	
MSE 1.1	Discipline 1 Catalog 1/ Course 1 Catalog 1	6	Exam
6. Cycle of professional elective training Catalog 2		18	
MSE 2.1	Discipline 2 Catalog 2 / Course 2 Catalog 2	6	Exam
MSE 2.2	Discipline 3 Catalog 2 / Course 3 Catalog 2	6	Exam
MSE 2.3	Course 4 Catalog 2 / Course 4 Catalog 2	6	Exam
Total ECTS Credits of Elective Courses		24	
ЗАГАЛЬНИЙ ОБСЯГ ОСВІТНЬОЇ ПРОГРАМИ/ THE TOTAL SCOPE OF THE EDUCATION PROGRAM		90	

* The choice of academic disciplines and the creation of an individual educational trajectory is regulated by the Law of Ukraine "On Higher Education" and internal regulatory documents. Selective components are selected by applicants for higher education from the university-wide catalog and the catalog of alternative elective disciplines/* The choice of academic disciplines and the creation of an individual educational trajectory is regulated by the Law of Ukraine "On Higher Education" and internal regulatory documents. Elective components are selected by higher education applicants from the university-wide catalog and the catalog of alternative elective disciplines

Table 2

General distribution of ECTS credits by blocks and cycles

Preparation cycle	Number of ECTS credits / % of the total number of ECTS credits		
	Compulsory educational components	Selective educational components	Just
General training cycle	12/13,3%	6/6,6%	24/26,6%
Cycle of professional training for Specialty of which.	54/60%	18/20%	53/58,8%
- Practical training	12/13,3%	-	10/11,1%
- Final certification	3/3,33%	-	3/3,33%
Just	66/73,4%	24/26,6%	90/100%

Table 3

Structural and logical scheme of the educational and professional program

1 semester	2 semester	3 semester	4 semester
General discipline			
GEN 501 Academic and Professional Communication / Akademikal end Professional Communication (3 ECTS)	SBA 500 Professional effectiveness (6 ECTS)		

	SBA 580 Research seminar: Digital technology (3 ECTS)			
Professional disciplines / Professional discipline				
SDT 502 Software Design and Architecture (6 ECTS)	SDT 505 Data Visualization (6 ECTS)			
SDT 501 Software engineering: Principles and Concepts (6 ECTS)	SDT 504 Software Project, Process and Quality Management (6 ECTS)			
SBA 551 Technology Entrepreneurship (6 ECTS)	SDT 503 Software Verification, Validation and Testing			
Practical training				
	SBA 594 Internship MSE/ Internship MSE (12 ECTS)			
Elective Discipline				
		MSE 1.1 Catalogue 1 Discipline 1 (6 ECTS)		
		MSE 2.1 Catalogue 2 Discipline 1 (6 ECTS)		
		MSE 2.2 Catalogue 2 Discipline 2 (6 ECTS)		
		MSE 2.3 Catalogue 2 Discipline 3 (6 ECTS)		
Атестація / Certification				
			SDT 599 MS Qualification Paper Preparation / Capstone Project MS	
			SDT 599 D MTSE Qualification Robot Defense Capstone Project Defense MTSE (6 ECTS)	

Table 4

Matrix of correspondence of program competencies to the components of the educational and professional program

List of competencies Snoop Dogg	Mandatory components of the OP											
	SBA 500	GEN 501	SDT 580	SDT 502	SDT 501	SDT 503	SDT 505	SDT 504	SBA 551	SDT 598	SDT 599	SDT 599-D
ZK01			+	+	+					+	+	+
ZK02		+								+	+	+
ZK03	+		+	+	+					+	+	+
ZK04	+	+		+	+			+	+	+	+	+
ZK05	+		+	+					+	+	+	+
ZK06	+			+						+	+	+
SK01				+	+			+		+	+	+
SK02			+	+	+			+		+	+	+
SK03				+				+			+	+
SK04				+					+		+	+
SK05					+			+		+	+	+
SK06				+				+	+		+	+
SK07				+	+			+		+	+	+
SK08				+	+	+		+		+	+	+

SK09								+			+	+
SK10				+	+	+		+	+	+	+	+
SK11				+	+	+		+	+		+	+
SK12							+				+	+

Table 5

Matrix of correspondence of learning outcomes and competencies determined by the educational and professional program

List of competencies	Mandatory components of the OP											
	SBA 500	GEN 501	SDT 580	SDT 502	SDT 501	SDT 503	SDT 505	SDT 504	SBA 551	SDT 598	SDT 599	SDT 599-D
RN01		+			+			+		+	+	+
RN02				+	+			+		+	+	+
RN03			+					+			+	+
RN04			+	+		+		+		+	+	+
RN05				+	+	+				+	+	+
RN06				+	+						+	+
RN07				+	+			+		+	+	+
RN08				+	+			+		+	+	+
RN09				+		+					+	+
PH10				+				+			+	+
PH11						+		+		+	+	+
PH12	+		+	+	+				+		+	+

PH13				+	+						+	+
PH14				+				+			+	+
RN15					+	+					+	+
PH16								+			+	+
PH17			+	+	+	+	+				+	+
PH18	+	+		+	+			+			+	+
PH19		+		+	+			+	+		+	+
PH20								+			+	+
PH21								+			+	+
PH22				+	+						+	+

9. List of regulatory documents on which the educational and professional program is based

1. The Law "On Higher Education" – <http://zakon4.rada.gov.ua/laws/show/1556-18>.
2. The Law "On Education" – <http://zakon5.rada.gov.ua/laws/show/2145-19>.
3. National Classifier of Ukraine: Classifier of Professions DK 003:2010. – <https://zakon.rada.gov.ua/rada/show/va327609-10>
4. List of fields of knowledge and specialties, 2015 – <http://zakon4.rada.gov.ua/laws/show/266-2015-p>.
5. Methodological recommendations for the development of higher education standards. Approved by the Order of the Ministry of Education and Science of Ukraine dated 01.06.2017, No. 600 (as amended by the Order of the Ministry of Education and Science of Ukraine dated 30.04.2020, No. 584. https://mon.gov.ua/storage/app/media/vyshcha/naukovo-metodychna_rada/2020-metod-rekomendacziyi.docx;
6. EU TUNING project (examples of learning outcomes, competencies) <http://www.unideusto.org/tuningeu>.
7. Standards and recommendations for quality assurance in the European Higher Education Area (ESG) // URL: https://ihed.org.ua/wp-content/uploads/2018/10/04_2016_ESG_2015.pdf.
8. EQF 2017 (European Qualifications Framework) // URL : <https://ec.europa.eu/ploteus/sites/eac-eqf/files/en.pdf>; <https://ec.europa.eu/ploteus/content/descriptors-page>
9. QF EHEA 2018 (EHEA Qualifications Framework) // URL : http://www.ehea.info/Upload/document/ministerial_declarations/EHEAParis2018_Communique_AppendixIII_952778.pdf
10. ISCED (International Standard Classification of Education, ISCED) 2011 // URL: <http://uis.unesco.org/sites/default/files/documents/international-standard-classification-of-education-isced-2011-en.pdf>.
11. ISCED-F (International Standard Classification of Education – Industries, ISCED-G) 2013 // URL: <http://uis.unesco.org/sites/default/files/documents/international-standard-classification-of-education-fields-of-education-and-training-2013-detailed-field-descriptions-2015-en.pdf>
12. Rashkevych Y.M. Bologna Process and New Paradigm of Higher Education: Monograph, 2014 // URL: <http://erasmusplus.org.ua/korysna-informatsiia/korysni-materialy/category/3-materialy-natsionalnoi-komandy-ekspertiv-shchodo-zaprovdzhennia-instrumentiv-bolonskohoprotsesu.html?download=82:bolonskyi-protses-nova-paradyhma-vyshchoi-osvity-yu-rashkevych&start=80>
13. Development of educational programs. Methodological recommendations / Authors: V.M. Zakharchenko, V.I. Lugovyi, Yu.M. Rashkevych, Zh.V. Talanova / Ed. V.G. Kremen. – K. : SE "NVC "Priorities", 2014. – 120 p. – URL: <http://erasmusplus.org.ua/korysna-informatsiia/korysni-materialy/category/3-materialynatsionalnoi-komandy-ekspertiv-shchodo-zaprovdzhennia-instrumentiv-bolonskohoprotsesu.html?start=80>.