


**MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE NATIONAL
TECHNICAL UNIVERSITY OF UKRAINE
"Ihor Sikorsky Kyiv Polytechnic Institute"**



ПТВЕРДЖЕНО
Вченою радою КПІ ім. Ігоря Сікорського
(протокол № 3 від «15» 03 2021 р.)

Голова Вченої ради
 Михайло ІЛЬЧЕНКО

**ТЕХНОЛОГІЇ
ДРУКОВАНИХ І ЕЛЕКТРОННИХ ВИДАНЬ
TECHNOLOGIES
OF PRINTED AND ELECTRONIC EDITIONS**

EDUCATIONAL AND SCIENTIFIC PROGRAM

second (master's) level of higher education

specialty 186 Publishing and printing
fields of knowledge 18 Production and technologies
qualification Master of publishing and printing

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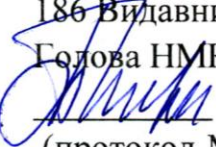
За підготовку здобувачів вищої освіти за освітньою програмою відповідають
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186 Видавництво та поліграфія

Голова НМКУ 186

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(протокол № 4 від « 11 » 02 2021 р.)

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Голова Методичної ради

 Юрій ЯКИМЕНКО

(протокол № 6 від 25.02 2021 р.)

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1. EDUCATIONAL PROGRAM PROFILE

Specialty 186 Publishing and printing

1 – General information	
Full name of higher education institution and institute/faculty	National Technical University of Ukraine "Ihor Sikorsky Kyiv Polytechnic Institute" Educational and scientific publishing and printing institute
The degree of higher education and the title of the qualification in the original language	The degree is a master's degree Qualification – master's degree in publishing and printing
HE cycle/level	NRK of Ukraine - 7th level QF-EHEA – the second cycle EQF-LLL – level 7
The official name of the educational program	Technologies of printed and electronic editions
Type of diploma and scope of the educational program	Master's degree, single, 120 credits, term of study 1 year, 9 months
Availability of accreditation	Specialty accreditation certificate НД 1192640, valid until July 1, 2024
Prerequisites	Having a bachelor's degree
Language(s) of instruction	Ukrainian
The term of validity of the educational program	Until the next accreditation
Internet address of the permanent placement of the educational program	http://vpi.kpi.ua http://osvita.kpi.ua/186
2 – The purpose of the educational program	
The purpose of the educational program is to train highly qualified specialists capable of creating modern scientific knowledge and innovative technologies, capable of organizing and conducting research, as well as capable of solving complex tasks and problems in the field of publishing and printing and their applications in various fields of science and technology. that will make a significant contribution to ensuring the sustainable development of society through the internationalization and integration of education, the latest scientific research and innovative developments.	

3 – Characteristics of the educational program	
Area of the subject field	<p><i>Objects of study and activity:</i> printed and electronic editions, packaging, multimedia information products and other types of publishing and printing products; processes of processing, registration, formation, reproduction, storage of text, graphics, sound, video and other multimedia information; research, improvement, creation, manufacture, distribution of publishing and printing products.</p> <p><i>Learning goals:</i> training of specialists capable of solving tasks of a research and/or innovative nature in the field of publishing and printing, which are characterized by complexity and uncertainty of conditions</p> <p><i>Theoretical content of the subject area:</i> concepts, concepts, principles: publishing processing of various types of information; development and implementation of technological processes; design and organization of production; creation and improvement of all types of publishing and printing products.</p> <p><i>Methods, means and technologies:</i> methods of design, manufacture, testing, control of all types of publishing and printing products; methods of calculation, design and implementation of technological processes.</p> <p><i>Tools and equipment:</i> materials, hardware and software complexes, control equipment, design and modeling of technological processes and all types of publishing and printing products; means of technological, informational, instrumental, metrological, diagnostic and organizational production support.</p>
Orientation of the educational program	Educational and scientific
The main focus of the educational program	<p>Special education for production and innovation activities in publishing houses, printing enterprises, publishing and printing complexes, centers and advertising agencies, other production associations for the production of printed, electronic, multimedia and combined publications, packaging, visual information products, and the implementation of research, improvement, modernization of processes, means and methods of their creation, processing, processing, printing, forming.</p> <p>Keywords: publishing and printing business, technological processes, multimedia, text processing, image processing and transformation, prepress processes, printing processes, production processes, production, publishing, packaging (packaging), printing materials, computer modeling, research.</p>
Features of the program	<p>Thorough fundamental training in combination with modern professional training, which allows to carry out innovative activities and work with leading institutions in the field of international economic relations, as well as the implementation of the program involves the involvement of practicing professionals, industry experts, and employer representatives in classroom classes.</p> <p>The list of components of the educational program is consistent with the list of educational components of the programs of the countries that conduct training in the relevant specialty (Institute of Papermaking and Printing of the Łódź Polytechnic, Institute of Mechanics and Printing of the Warsaw Polytechnic, Institute of Printing and Media Technologies of the Leipzig University of Culture and Arts and others, which together with the Publishing printing institute to the International circle of higher primary institutions that train specialists in publishing and printing production).</p>

4 – Graduates' suitability for employment and further education	
Suitability for employment	Types of economic activity (according to the Classifier of types of economic activity DK 003:2010): 2149.2 – research engineer; 2149.2 – technological engineer; 2149.2 – technologist (publishing and printing production), technologist of electronic multimedia publications, technologist-publisher; 2452.2 – designer of multimedia objects, designer of packaging
Further education	Continuation of studies at the third (educational and scientific) level of higher education and/or acquisition of additional qualifications in the postgraduate education system
5 – Teaching and assessment	
Teaching and learning	Lectures, practical and seminar classes, computer workshops and laboratory works; course projects and works; the technology of mixed learning, practice and excursions; execution of a master's thesis.
Assessment	Assessment of students' knowledge is carried out in accordance with the Regulation on the system of assessment of learning outcomes at KPI named after Igor Sikorsky for all types of classroom and extracurricular work (current, calendar, semester control); oral and written exams, tests
6 – Software competencies	
Integral competence	The ability to solve complex tasks of a research and/or innovative nature in the field of publishing and printing.
General competences (3K)	
3K 1	Ability to apply knowledge in practical situations.
3K 2	Ability to generate new ideas (creativity).
3K 3	Ability to communicate in a foreign language.
3K 4	Ability to search process and analyze information from various sources.
3K 5	Ability to develop and manage projects.
3K 6	Ability to make informed decisions.
3K 7	The ability to evaluate and ensure the quality of the work performed
3K 8	Ability to abstract thinking, analysis and synthesis.
Special (professional, subject) competences (CK)	
CK 1	The ability to comprehensively evaluate the influence of the environment of the functioning of technological and production processes for the improvement of product parameters.
CK 2	The ability to critically consider the problems of publishing and printing and at the border of the fields of knowledge, as well as promising directions of the industry's development.
CK 3	The ability to determine the main functions and areas of improvement of production support, to develop measures of operational and prospective management, forecasting and planning of production.
CK 4	The ability to organize the operation of technical and software means of publishing processing of information and materials, to analyze and evaluate the possibilities of adapting technological complexes for effective use during the preparation of all types of publishing and printing products in a specific production system
CK 5	The ability to develop and implement new technological processes, in particular resource- and energy-saving technologies, and types of products in the field of publishing and printing, to optimize production processes in accordance with the requirements.
CK 6	Ability to organize activities and effectively manage institutions/units in the field of publishing and printing
CK 7	Ability to apply modern methods and tools for research in the field of publishing and printing, as well as product quality assurance

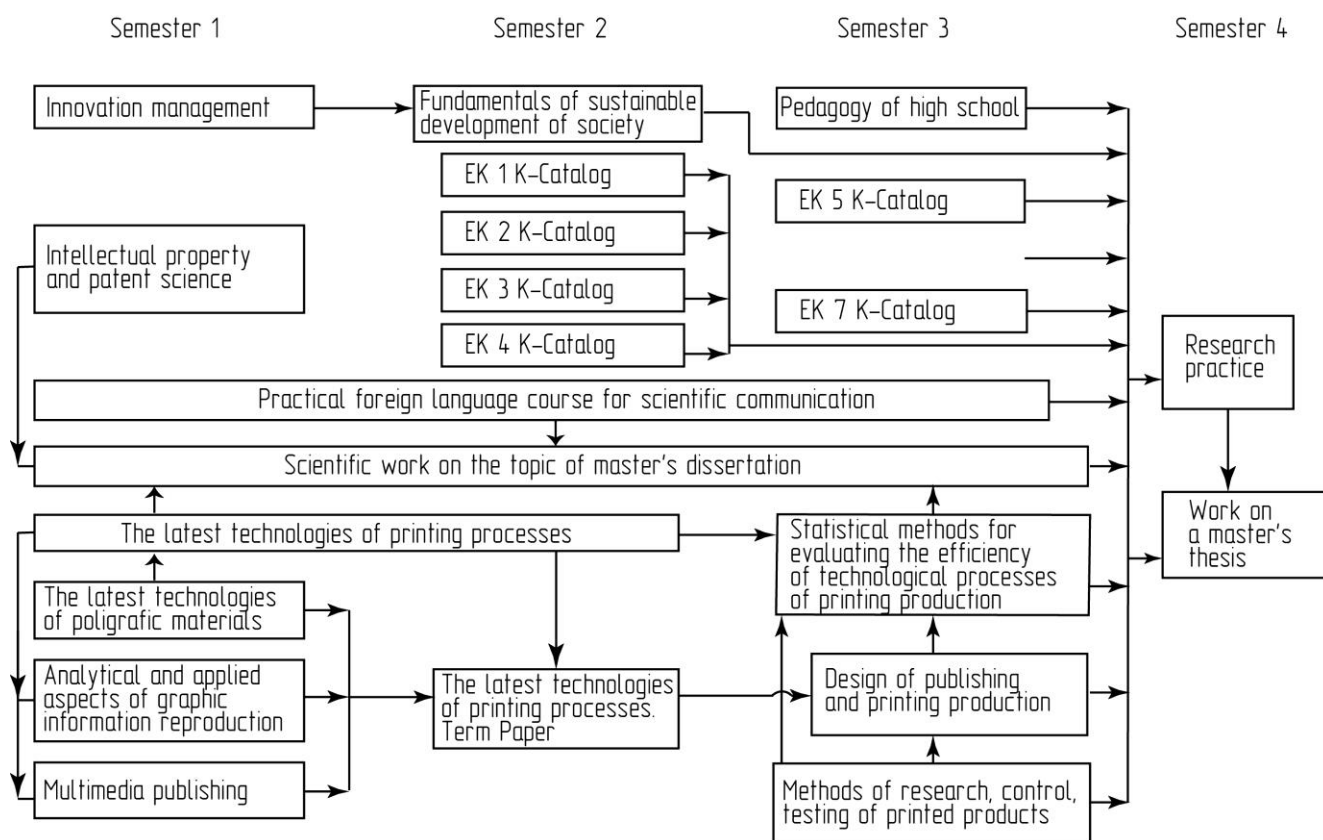
CK 8	The ability to develop and implement scientific and applied projects in the field of publishing and printing and related interdisciplinary areas, taking into account technical, economic, social, legal and environmental aspects
CK 9	The ability to plan, organize and carry out scientific research in the field of publishing and printing
CK 10	The ability to carry out scientific and pedagogical activities in institutions of higher and professional pre-higher education, related to the teaching of educational disciplines in the field of publishing and printing.
CK 11	The ability to develop, on the basis of interdisciplinary approaches, technological processes for the processing of graphic information, to predict the quality of its reproduction.
CK 12	The ability to comprehensively evaluate the effectiveness of technological processes of printing production, to investigate the causes of problems, to develop and implement measures to eliminate them based on statistical methods of evaluating technological processes
7 – Program learning outcomes	
PH01	To be responsible for the development of professional knowledge and practices, evaluation of the strategic development of the team, formation of an effective personnel policy
PH02	Assess prospects, create scientifically and technically sound forecasts, research and carry out conceptual and substantive modeling of trends in the development of the industry.
PH03	Make effective decisions on issues of publishing and printing, including in difficult and unpredictable conditions; predict their development and market conditions; determine the factors affecting the achievement of set goals, in particular, consumer requirements; analyze and compare alternatives; assess risks and likely consequences of decisions.
PH04	Communicate freely orally and in writing in Ukrainian and one of the foreign languages (English, German, Italian, French, Spanish) when discussing professional issues, research and innovations in the field of publishing and printing and related problems.
PH05	To develop and implement projects of publishing and printing productions and systems of their engineering and technical support, taking into account engineering, legal, economic, ecological and social aspects, to carry out their informational and methodical support.
PH06	Manage complex activities in the field of publishing and printing, organize and improve the activities of publishing and printing industries, develop plans and measures for their implementation, ensure quality, and calculate the technical and economic efficiency of production.
PH07	Carry out computer design of individual components of the technological process.
PH08	Develop and implement effective technologies, develop instructions and technological regulations for the production of publishing and printing products.
PH09	Conduct research and/or conduct innovative activities in order to obtain new knowledge and create new technologies and products in the field of publishing and printing and in wider multidisciplinary contexts
PH10	Build and research models of technological processes of publishing and printing, evaluate their adequacy, determine the limits of applicability.
PH11	Apply modern experimental and mathematical methods, information technologies and specialized software for research and development in the field of publishing and printing.
PH12	Search for necessary data in scientific literature, databases and other sources, analyze and evaluate these data.
PH13	To use knowledge of national and international legislation regarding the protection and preservation of copyrights in the production of printed and electronic publications, packaging, multimedia information products and other types of publishing and printing products in practical activities.
PH14	Plan and carry out scientific research in the field of publishing and printing, formulate and test hypotheses, choose methods and tools, analyze results, justify conclusions.
PH15	Develop and teach educational disciplines related to the production and technologies of publishing and printing for institutions of higher and pre-higher education.

PH16	Develop technological processes for processing graphic information in the preparation of printed and electronic publications using interdisciplinary approaches.
PH17	Plan and optimize technological processes for the production of printed and electronic publications based on statistical methods for evaluating the effectiveness of technological processes
8 – Resource support for program implementation	
Staffing	In accordance with the personnel requirements for ensuring the implementation of educational activities for the corresponding level of HE, approved by the Resolution of the Cabinet of Ministers of Ukraine dated 12.30.2015 No. 1187 as amended. Practitioners from publishing and printing organizations and printing houses will be involved in teaching individual disciplines.
Logistics	In accordance with the technological requirements for the material and technical support of educational activities of the corresponding level of HE, approved by the Resolution of the Cabinet of Ministers of Ukraine dated 12.30.2015 No. 1187 as amended. The use of special hardware and software, capabilities of laboratories, which will ensure quality training at the appropriate technical level, is foreseen. A remote option for obtaining information and interacting with teachers is provided.
Informational and educational and methodological support	In accordance with the technological requirements for educational, methodological and informational support of educational activities of the corresponding level of HE, approved by Resolution of the Cabinet of Ministers of Ukraine dated 12.30.2015 No. 1187 as amended. Scientific works in the field of publishing and printing, materials on specialized portals, resources using cloud services, webinars, presentations, articles in professional publications, and use of the KPI library are used during teaching.
9 – Academic mobility	
National credit mobility	Possibility of academic mobility, double graduation
International credit mobility	The possibility of international academic mobility, double graduation, included student training (Institute of Papermaking and Printing of the Łódź Polytechnic, Institute of Mechanics and Printing of the Warsaw Polytechnic, Leipzig University of Applied Sciences and others, which together with the Publishing and Printing Institute are part of the International circle of higher primary institutions that prepare specialists in publishing and printing production), as well as other higher education institutions under the Erasmus+ program and other programs of KPI named after Igor Sikorsky
Training of foreign applicants for higher education	It takes place in academic groups on a general basis, or in separate groups of foreign students

2. LIST OF COMPONENTS THE EDUCATIONAL PROGRAM

Discipline code	Components of the educational program (disciplines, practices, qualification work)	Educational credit	Form of final control
1. REGULATORY educational components			
1.1. General training cycle			
3O 1	Intellectual property and patent science	3	Test
3O 2	Practical foreign language course for scientific communication	4,5	
3O 2.1	Practical foreign language course for scientific communication. Part 1.	3	Test
3O 2.2	Practical foreign language course for scientific communication. Part 2	1,5	Test
3O 3	Fundamentals of sustainable development of society	2	Test
3O 4	Innovation management	3	Test
3O 5	Pedagogy of high school	2	Test
3O 6	Methods of research, control, testing of printed products	4	Test
3O 7	Statistical methods for evaluating the efficiency of technological processes of printing production	4,5	Test
1.2. Cycle of professional training			
ΠO 1	The latest technologies of poligrafic materials	3	Test
ΠO 2	Multimedia publishing	4,5	Test
ΠO 3	The latest technologies of printing processes	14,5	
ΠO 3.1	The latest technologies of prepress and printing processes	5	Test
ΠO 3.2	Special types of printing	5	Test
ΠO 3.3	The latest technologies of post-printing and finishing processes	4,5	Test
ΠO 4	The latest technologies of printing processes. Term Paper	1	Test
ΠO 5	Design of publishing and printing production	4,5	Exam
<i>Research (scientific) component</i>			
ΠO 6	Analytical and applied aspects of graphic information reproduction	5	Exam
ΠO 7	Scientific work on the topic of master's dissertation	7,5	
ΠO 7.1	Scientific work on the topic of master's dissertation. Part 1. Basics of the scientific research	2	Test
ΠO 7.2	Scientific work on the topic of master's dissertation. Part 2. Research work on the topic of master's dissertation	5,5	Test
ΠO 8	Research practice	9	Test
ΠO 9	Work on a master's thesis	17	Defense
2. SELECTIVE educational components			
ΠIB 1	Educational component 1 K-Catalog	5	Exam
ΠIB 2	Educational component 2 K-Catalog	5	Exam
ΠIB 3	Educational component 3 K-Catalog	5	Exam
ΠIB 4	Educational component 4 K-Catalog	4	Test
ΠIB 5	Educational component 5 K-Catalog	4	Test
ΠIB 6	Educational component 6 K-Catalog	4	Test
ΠIB 7	Educational component 7 K-Catalog	4	Test
Total amount of regulated components			89
Total amount of selectived components			31
The amount educational components that ensure the acquisition of competencies defined by the standard of higher education			84
TOTAL VOLUME OF THE EDUCATIONAL PROGRAM			120

3. STRUCTURAL AND LOGICAL SCHEME OF THE EDUCATIONAL PROGRAM



4. FORM OF CERTIFICATION OF HIGHER EDUCATION ACCESSORIES

Attestation of students of higher education in the educational and professional program "Technology of printed and electronic editions" specialty 186 Publishing and printing is carried out in the form of a public defense (demonstration) of a qualifying work - a master's thesis. The qualifying work is checked for plagiarism and after protection is placed in the NTB repository of the University for free access. Attestation is carried out openly and publicly. The attestation ends with the issuance to the recipient of a document of the prescribed format awarding him a master's degree with the qualification: master's degree in publishing and printing, under the educational and professional program "Technologies of printed and electronic editions".

5. MATRIX OF CORRESPONDENCE OF PROGRAM COMPETENCES TO THE COMPONENTS OF THE EDUCATIONAL PROGRAM

	3O 1	3O 2	3O 3	3O 4	3O 5	3O 6	3O 7	ΠO1	ΠO2	ΠO3	ΠO4	ΠO5	ΠO6	ΠO7	ΠO8	ΠO9
3K 1					+		+					+	+	+	+	
3K 2	+			+								+		+		
3K 3		+														
3K 4	+	+			+							+		+	+	
3K 5				+								+	+			+
3K 6			+	+	+		+					+	+	+	+	+
3K 7					+	+	+					+		+	+	+
3K 8	+						+							+		+
CK 1						+	+		+	+	+	+	+	+		+
CK 2			+								+	+	+			
CK 3				+			+				+		+			
CK 4						+			+	+	+			+	+	
CK 5				+			+		+	+	+		+	+		
CK 6				+									+			
CK 7						+	+					+			+	+
CK 8	+		+	+		+						+		+	+	+
CK 9							+								+	+
CK 10					+											
CK 11								+			+					
CK 12						+	+				+					

6. MATRIX OF PROVIDING PROGRAM LEARNING RESULTS WITH RELEVANT COMPONENTS OF THE EDUCATIONAL PROGRAM

	3O 1	3O 2	3O 3	3O 4	3O 5	3O 6	3O 7	ΠO1	ΠO2	ΠO3	ΠO 4	ΠO5	ΠO6	ΠO7	ΠO8	ΠO9
PH1				+												
PH2			+								+		+			
PH3				+		+	+					+	+	+	+	+
PH4		+														
PH5													+			+
PH6				+		+									+	
PH7							+			+		+	+	+		
PH8									+		+		+		+	
PH9				+										+		+
PH10							+				+			+	+	+
PH11						+	+					+		+		
PH12							+					+		+		+
PH13	+									+				+	+	
PH14	+						+								+	+
PH15					+											
PH16								+			+					+
PH17						+	+				+		+			+