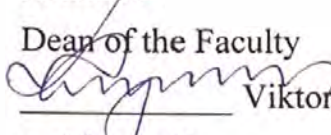


MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
NATIONAL AVIATION UNIVERSITY

Faculty of Architecture, Civil Engineering and Design
Computer Technologies of Airport Construction and Reconstruction
Department

AGREED

Dean of the Faculty


Viktor KARPOV

« 28 » 10 2022

APPROVED

Vice Rector for Academics


Anatolii POLUKHIN

« 07 » 11 2022



Quality Management System

COURSE TRAINING PROGRAM

on

"Civil Engineering Materials"

Educational-Professional Program: «Industrial and Civil Engineering»


Field of study: 19 «Architecture and Construction»

Specialty: 192 «Building and Civil Engineering»

Form of training	Sem.	Total (hours/ ECTS credits)	Lec.	Prac.	Lab.	Self-study	Homework, Control (home) works	CP/ TP	Form of control
Full-time	4	150/5,0	34	-	34	82	HW	-	Examination 4 th semester
Part-time	-	-	-	-	-	-	-	-	-


Index: CB-5-192-1/21-2.1.23

QMS NAU CTP 10.01.04-01-2022

	Quality Management System Course Training Program on «Civil Engineering Materials»	Document Code	QMS NAU CTP 10.01.04-01-2022
		page 2 з 2	

The Course Training Program on “Civil Engineering Materials” is developed on the basis of the Educational-Professional Program “Industrial and Civil Engineering”, Bachelor Curriculum and Extended Curriculum № CB-5-192-1/21, № ECB-5-192-1/21 for training higher education seekers of the Bachelor degree of specialty 192 "Building and Civil Engineering" and corresponding normative documents.

Developed by:
Associate professor of the Computer Technologies
of Airport Construction and
Reconstruction Department

 Svitlana SKREBNIÉVA

Professor of the Computer Technologies
of Airport Construction and
Reconstruction Department


 Ihor YAKOVENKO

Associate professor of the Computer Technologies
of Airport Construction and
Reconstruction Department

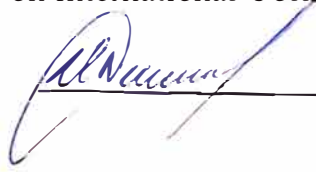
 Oleksandra SHEVCHENKO

Discussed and approved by the Graduate Department for the Specialty 192 “Building and Civil Engineering” (Educational Professional Program “Industrial and Civil Engineering”) – Computer Technologies of Airport Construction and Reconstruction Department, Minutes № 12 of "25" 10 2022.

Guarantor of the Educational and
Professional Program  Nataliia KOSTYRA

Head of the Department  Oleksandr LAPENKO

Vice Rector on International Collaboration and Education


 Iryna ZARUBINSKA
«30» 10 2022

Level of document – 3b
Planned term between revisions – 1 year
Master copy



CONTENTS

Introduction	4
1. Explanatory Note	4
1.1. Role, goal and objectives of the academic discipline.....	4
1.2. Educational outcomes of the academic discipline	4
1.3. Competences obtained through the academic discipline	5
1.4. Interdisciplinary links	5
2. Program of the academic discipline	6
2.1. Content of the academic discipline	6
2.2. Module structure and integrated requirements for each module.....	6
2.3. Thematic plan.....	9
2.4. Task for homework.....	12
2.5. List of questions for exam and final test.....	13
3. Training materials for the discipline	13
3.1. Teaching methods	13
3.2. Recommended literature (basic and additional literature)	13
3.3. Internet information resources	14
4. Rating System of knowledge and skills assessment	15

	Quality Management System Course Training Program on «Civil Engineering Materials»	Document Code	QMS NAU CTP 10.01.04-01-2022
		page 4 of 17	

INTRODUCTION

The Course Training Program of the academic discipline "Civil Engineering Materials" was developed on the basis of the "Methodological recommendations for the development and execution of the syllabus of educational discipline of full-time and part-time forms of training", approved by rector's order No. 249/roz. of 29.04.2021 and relevant regulatory documents.

1. EXPLANATORY NOTE

1.1. Role, goal and objectives of the academic discipline

This discipline is the theoretical and practical basis of the set of knowledge and skills that form the profile of a specialist in the field of industrial and civil construction, allows to navigate the modern nomenclature of building materials and products, their main properties, production technologies and rational areas of application in buildings and structures, and also understand the physical essence of the architectural project.


The goal of teaching the discipline is to form a system of knowledge and skills about the basics of construction material science at the modern level of science and technology; study of the structure, physical and mechanical properties of building materials and products, technologies of their production, rational use, transportation, storage, their economic consumption and interchangeability of building materials.

The objectives of the academic discipline are:

- to teach the future specialist in the field of industrial and civil construction to economically choose, control quality, use all types of construction materials and products in the construction, design and operation of buildings and structures; study of the main requirements for design objects and factors affecting them;
- teach how to solve engineering problems related to the production of building materials, their application, ensuring labor protection, related to the construction and operation of buildings and structures.

1.2. Educational outcomes of the academic discipline

PLO2 – Participate in research and development in the field of architecture and construction. PLO4 – Design and implement technological processes of construction production, using appropriate equipment, materials, tools and methods. PLO7 – Perform data collection, interpretation and application, including through the search, processing and analysis of information from various sources. PLO8 – Demonstrate the ability to effectively use modern building materials, products and structures based on knowledge of their technical characteristics and manufacturing technology.

	Quality Management System Course Training Program on «Civil Engineering Materials»	Document Code	QMS NAU CTP 10.01.04-01-2022
		page 5 of 17	

1.3. Competencies obtained through the academic discipline

According to the content of the discipline, the applicant of higher education must acquire the following competencies: determine the physical and mechanical properties of building materials, cement brands, classes of concrete, asphalt concrete and thermal insulation materials, perform standard tests of bricks, mineral, bituminous and polymer binders and paint materials; independently choose the necessary grades and grades of steel for the manufacture of prefabricated and monolithic reinforced concrete structures; get acquainted with the basic construction and technical properties of building materials and their areas of application.

IC. The ability to solve complex specialized tasks and practical problems in the field of construction or in the learning process, which involves the application of theories and methods of determining the strength, stability, durability, reliability and safety of buildings and structures; application of information technologies, software complexes, automated design systems.

General competences (GC):


GC2 – Knowledge and understanding of the subject area and professional activity. GC6 – Ability to independently acquire knowledge by searching, processing and analyzing information from various sources. GC7 – Interpersonal skills. GC9 – Ability to realize one's rights and responsibilities as a member of society; awareness of the value of a civil (free democratic) society and the need for its sustainable development, the rule of law, the rights and freedoms of a person and a citizen in Ukraine.

Professional competences (GC):

PC1 – Ability to use conceptual scientific and practical knowledge of mathematics, chemistry and physics to solve complex practical problems in construction and civil engineering. PC4 – Ability to choose and use appropriate equipment, materials, tools and methods for designing and implementing technological processes of construction production. PC7 – Ability to take responsibility for developing and making decisions in the field of architecture and construction in unpredictable work contexts. PC10 – Ability to ensure the organization of the construction of buildings and structures of industrial and civil purposes using modern construction materials and energy-efficient technologies.

1.4. Interdisciplinary links

The academic discipline “Civil Engineering Materials” has an interdisciplinary nature and combines courses of professional training disciplines. This discipline is based on the knowledge of such disciplines as “Higher Mathematics”, “Physics”, “Chemistry”, “Introduction to Civil Engineering”, “Strength of Materials” and is the basis for studying the disciplines: “Building Constructions”, “Reinforced Concrete and Stone Constructions”, “Steel

	Quality Management System Course Training Program on «Civil Engineering Materials»	Document Code	QMS NAU CTP 10.01.04-01-2022
		page 6 of 17	

Constructions”, “Construction Technology”, “Architecture of Buildings and Structures”.

2. PROGRAM OF THE ACADEMIC DISCIPLINE

2.1. Content of the academic discipline

The educational material of the discipline is structured on a modular basis and consists of two educational modules, namely:

- **educational module 1** "Natural building materials";
- **educational module 2** "Artificial building materials and products", each of which is a logically complete, relatively independent, integral part of the discipline, mastering which involves a modular test and results analysis.

2.2. Module structure and integrated requirements for each module

Module 1 “Natural building materials”

Integrated requirements for module 1:

Know: principles of construction and general classification of composite materials for construction purposes, modern concepts of structure formation and its role in obtaining composite construction materials with specified properties, methods of assessing the composition and structure of construction materials, standardization of natural construction materials.


Be able to: determine the main properties and technical characteristics of natural building materials, in accordance with the requirements of the current regulatory building codes, technical requirements and their application in the construction industry.

Topic 1. Basics of building materials science.

The purpose and tasks of the course "Civil Engineering Materials". Principles of construction of composite materials for construction purpose. General classification of composite materials for construction purposes. Modern concepts of structure formation and its role in obtaining building composite materials with specified properties. Methods of assessing the composition and structure of building materials. Chemical and structural-mechanical methods. Physico-chemical methods. Standardization of building materials (unification and typification).

Topic 2. Properties of building materials (physical, mechanical, chemical, technological).

Physical properties: true, average, bulk and relative density of materials, porosity, density, voids. Hydrophysical properties of materials: water absorption, water resistance, capillary absorption, frost resistance, hydrophilicity, hydrophobicity, wet deformations. Mechanical properties: strength, hardness, abrasion resistance. Deformation properties. Operational (special) and

	Quality Management System Course Training Program on «Civil Engineering Materials»	Document Code	QMS NAU CTP 10.01.04-01-2022
		page 7 of 17	

technological properties of materials (durability, weather resistance). Chemical properties: corrosion resistance, biocorrosion, adhesion, cohesion.

Topic 3. Natural stone materials.

Mineralogical composition and properties of minerals. The main rock-forming minerals. Mohs scale. Features of the formation and classification of rocks. The main rock-forming minerals of igneous, sedimentary and metamorphic rocks. The structure and properties of rocks of various origins. Technological classification of rocks. Classification of natural stone according to durability. Use of rock mining and processing waste. The main types of building materials and natural stone products. Problems of durability and protection of stone materials from corrosion.

Topic 4. Wood materials and products.

Wood as a natural organic composite material. General Information. Wood structure. Microstructure and macrostructure of wood. The main properties of wood. Wood species. Defects of wood. Characteristics of wood materials and products. Biocomposites and composite materials based on wood processing waste. Durability issues. Protection of wood from biological destruction. Types and classification of flame retardants and antiseptics. Types of wood drying, advantages and disadvantages.

Module 2 “Artificial building materials and products”

Integrated requirements for module 2:

To know: general information and classification of building ceramics; peculiarities of the formation of the vitreous and glass crystal structure and its influence on the properties of the obtained materials; physicochemical patterns of formation of the composition and structure of mineral binders; features of structure formation and its influence on physical-mechanical and special properties of concrete.

Be able to: determine the main properties and main technical characteristics of artificial building materials and products, in accordance with the requirements of the current regulatory framework and their application in the construction industry.

Topic 1. Ceramic materials and products.

General information and classification of building ceramics. Basic raw materials for the production of ceramic products. Characteristics and physical and mechanical properties of clay. Plastic and non-plastic raw materials. Additives to non-plastic raw materials. Characteristics of ceramic wall materials. Products for external cladding. Products for interior lining of walls and floors. Special purpose products. Materials for decorating ceramics. Durability of ceramics and ways to increase it.



Topic 2. Materials and products from mineral melts.

Peculiarities of the formation of vitreous and glass crystal structure and its influence on the properties of the obtained materials. Classification of materials based on mineral melts. Properties of glass. Raw materials for glass production. Glass materials and products. The main types of construction glass products and their application. Crystalline materials.

Topic 3. Metal materials.

General characteristics of metals. Basic properties of metals. Classification and characteristics of cast iron. Classification and characteristics of carbon steels. Problems of durability and protection of metals from corrosion. Types of metals and metal alloys. Cast iron production technology. Steel production technology. Their properties and application in construction. Assortment of metal products. Processing and welding of metals. Protection of metals from corrosion. Determination of the main technical characteristics of metal products.

Topic 4. Inorganic binders.

Physico-chemical regularities of formation of the composition and structure of mineral binders. General classification of mineral binders. Classification of inorganic binders. Air binders. Basic technical characteristics of gypsum binders and materials based on them. Magnesium binders. Hydraulic binders. Special types of cement. Mineralogical aspects of durability of binders. Determination of technical characteristics of binders.

Topic 5. Concretes, their properties and application in construction.

Peculiarities of structure formation and its influence on physical-mechanical and special properties of concrete. Standardization and classification of concrete. Properties of concrete mixture. Heavy concrete. Characteristics of materials for concrete. Design of concrete composition. General properties of heavy concrete. Lightweight concrete. Characteristics of raw materials for lightweight concrete. Concrete on porous aggregates. Non-woody concrete. Special concretes. Problems of durability and protection of concrete from corrosion. Determination of technical characteristics of concrete.

Topic 6. Construction mortars and dry construction mixtures.

Peculiarities of the composite construction of mortars. Materials for the production of construction mortars. Properties of mortar mixture and construction mortars. Types and characteristics of construction solutions. Dry building mixes. Determination of technical characteristics of mortar mixture and building solutions.

Topic 7. Bituminous and tar binders and materials based on them.

Features of the formation of binders of organic origin and their classification. Bituminous binders. Tar binders. Asphalt and tar concrete. Characteristics of materials based on bituminous and tar binders. Durability of materials based on bitumen and tars, environmental problems associated with their use. Determination of technical characteristics of bituminous and tar materials.



Topic 8. Polymeric materials.

Classification of polymeric substances and materials based on them. Physico-chemical features of directed synthesis of polymeric substances and materials with required properties. General characteristics of polymeric substances. Basic properties of polymer materials (plastics). Production technology of polymeric materials. Characteristics of materials based on polymeric substances. Evaluation of durability of materials based on plastics. Problems of ecology of production and application of polymeric materials. Eco-technologies of secondary use of plastics. Determination of technical characteristics of polymer materials.

Topic 9. Paint materials.

Peculiarities of composite construction of paint materials and coatings. Classification of paint and varnish materials. Characteristics of the main components of paint and varnish materials. Primers, putties, paint mixtures, varnishes, enamels. Classification and characteristics of paint coatings.

Topic 10. Thermal insulation, acoustic materials of organic and inorganic origin.

General Information. The structure and properties of thermal insulation materials of organic and inorganic origin. Application of thermal insulation products. Sound-absorbing and sound-insulating materials and products. Manufacturing technologies.

2.3. Thematic plan

№	Topic	Academic hours								
		Full-time study				Part-time study				
		Total	Lectures	Lab. classes	Self-study	Total	Lectures	Lab. classes	Self-study	
1	2	3	4	5	6	7	8	9	10	
Module №1 “Natural building materials”										
1.1	Basics of building materials science. General classification of composite materials for construction purposes. Standardization of building materials (unification and typification).	4 semester				5 semester				
		6	2	-	4	-	-	-	-	
1.2	Studying the safety rules of behavior in the laboratory, familiarization with the laboratory equipment. study of real samples of building materials.	6	-	2	4	-	-	-	-	
1.3	Properties of building materials (physical, mechanical, chemical, technological).	6	2	-	4	-	-	-	-	



1	2	3	4	5	6	7	8	9	10
1.4	Determination of physical and mechanical properties of building materials.	6	-	2	4	-	-	-	-
1.5	Natural stone materials. Mineralogical composition and properties of minerals. The main rock-forming minerals. The structure and properties of rocks of various origins.	6	2	-	4				
1.6	Determination of external features of samples of the main rock-forming minerals and rocks. Determination of rock hardness.	6	-	2	4	-	-	-	-
1.7	Wood materials and products. Wood as a natural organic composite material. General Information.	6	2	-	4	-	-	-	-
1.8	Determination of the main physical and mechanical properties of wood.	6	-	2	4	-	-	-	-
1.9	Module Test №1	6	-	2	4	-	-	-	-
	Total for Module №1	54	8	10	36	-	-	-	-
Module №2 “Artificial building materials and products”									
2.1.	Ceramic materials and products. General information and classification of building ceramics. Basic raw materials for the production of ceramic products.	4	2	-	2	-	-	-	-
2.2.	Determination of the quality of ceramic wall products (bricks and stones) in accordance with the requirements of the standard.	4	-	2	2	-	-	-	-
2.3.	Classification of materials based on mineral melts. Properties of glass. Raw materials for glass production. Glass materials and products. The main types of construction glass products and their application.	4	2	-	2	-	-	-	-
2.4.	Determination of technical characteristics of materials and products from mineral melts.	4	-	2	2	-	-	-	-
2.5.	Metal materials. General characteristics of metals. Basic properties of metals. Classification and characteristics of cast iron. Classification and characteristics of carbon steels.	4	2	-	2	-	-	-	-



1	2	3	4	5	6	7	8	9	10
2.6.	Assortment of metal products. Determination of the main technical characteristics of metal products.	4	-	2	2	-	-	-	-
2.7.	Inorganic binders. General classification of mineral binders. Classification of inorganic binders.	4	2	-	2	-	-	-	-
2.8.	Determination of normal thickness, terms of hardening of gypsum dough. Determination of the brand of gypsum binders.	4	-	2	2	-	-	-	-
2.9.	Hydraulic binders. Special types of cement. Mineralogical aspects of durability of binders. Determination of technical characteristics of binders.	4	2	-	2	-	-	-	-
2.10	Determination of normal density, hardening terms for cements of different types. Definition of Portland cement brand.	4	-	2	2	-	-	-	-
2.11	Concretes, their properties and application in construction. Standardization and classification of concrete. Properties of concrete mixture. Heavy concrete. Characteristics of materials for concrete.	4	2	-	2	-	-	-	-
2.12	Determining the quality of aggregates for heavy concrete.	4	-	2	2	-	-	-	-
2.13	Designing the composition of heavy concrete.	3	2	-	1	-	-	-	-
2.14	Preparation of concrete mixture of heavy concrete. Determination of the brand by the ease of placement of the concrete mixture. Definition of concrete class.	4	-	2	2				
2.15	Construction mortars and dry construction mixtures. Peculiarities of the composite construction of mortars. Materials for the production of construction mortars.	3	2	-	1				
2.16	Determination of technical characteristics of mortar mixture and building solutions. Determination of the brand of construction solutions.	3	-	2	1				
2.17	Bituminous and tar binders and materials based on them. Features of the formation of binders of organic origin and their classification.	3	2	-	1				




1	2	3	4	5	6	7	8	9	10
2.18	Determination of the main properties of bitumen: softening temperature, elongation, penetration.	3	-	2	1				
2.19	Polymer materials. Classification of polymeric substances and materials based on them. General characteristics of polymeric substances. Basic properties of polymer materials (plastics).	3	2	-	1				
2.20	Determination of the swelling coefficient of beaded polystyrene and its physical and mechanical properties.	3	-	2	1				
2.21	Paint materials. Peculiarities of composite construction of paint materials and coatings. Classification of paint and varnish materials. Characteristics of the main components of paint and varnish materials.	3	2	-	1				
2.22	Study of oil content and coverage of pigment. Determination of oil and paint viscosity.	3	-	2	1				
2.23	Thermal insulation, acoustic materials of organic and inorganic origin. General Information. The structure and properties of thermal insulation materials of organic and inorganic origin.	3	2	-	1				
2.24	Heat-insulating acoustic materials of inorganic origin. Study of the dynamics of changes in temperature fields.	3	-	2	1				
2.25	Homework	8	-	-	8				
2.26	Module Test №2	3	2	-	1	-	-	-	-
	Total for Module №2	96	26	24	46	-	-	-	-
	Total For Academic Discipline	180	150	34	82	-	-	-	-

2.4. Task for homework

Homework in the discipline is performed in the fourth semester in accordance with the approved methodological recommendations, in order to consolidate and deepen the theoretical knowledge and skills of the student and is an important stage in the assimilation of the academic material taught in the fourth semester.

Homework is performed on the basis of educational material submitted for independent study by students and is a component of module № 2 "Artificial building materials and products".

The specific goal of the homework is to calculate the composition of heavy

	Quality Management System Course Training Program on «Civil Engineering Materials»	Document Code	QMS NAU СТР 10.01.04-01-2022
		page 13 of 17	

concrete for the manufacture of reinforced concrete structures based on the initial data using the calculation-experimental method of determining the composition of normal hardening heavy concrete.

Execution, registration and protection of the homework is carried out by the student individually in accordance with methodical recommendations.

The time required to complete homework is 8 hours of independent work.

2.5. List of questions for exam and final test

The list of questions and the tasks to prepare for the exam are developed by the teacher of the department in accordance with the work program and communicated to the students.

3. TRAINING MATERIALS FOR THE DISCIPLINE

3.1. Teaching methods

When studying the discipline, the following teaching methods are used:

- explanatory-illustrative method;
- method of problem statement;
- reproductive method;
- research method.

The implementation of these methods is carried out during lectures, laboratories, demonstrations, independent solving of problems and performing experiments, work with educational handbooks, study guides, building codes and requirements.

3.2. Recommended literature (basic and additional literature)

Basic literature

3.2.1. Кривенко П. В., Пушкарьова К.К., Барановський В.Б. Будівельне матеріалознавство. – К.: Вища школа, 2019. – 624 с.

3.2.2. Дворкін Л. Й. Будівельне матеріалознавство. Навчально-довідковий посібник українською та англійською мовами. Рівне: НУВГП, 2017. – 355 с.

3.2.3. Сучасні українські будівельні матеріали, вироби та конструкції. Науково-практичний довідник. – К.: Асоціація “ВСВБМВ”, 2012. – 664 с.

3.2.4. Рунова Р.Ф., Дворкін Л.Й., Дворкін О.Л., Носовський Ю.Л. В’язучі речовини: Підручник. – К.: Основа, 2012. –448 с.

3.2.5. Будівельне матеріалознавство. Лабораторний практикум для студентів спеціальності «Будівництво та цивільна інженерія» / С.М. Скребнева, В.В. Грабовчак, А.І. Глушаниця/ – К.: НАУ, 2019. – 88 с.



Additional literature

3.2.6. Фізико-хімічна механіка дорожньо-будівельних матеріалів: Навчальний посібник / Белятинський А.О., Краюшкіна К.В. – К.: НАУ, 2016. – 244 с.

3.2.7. Гоц В.І. та ін. Бетони і будівельні розчини. / Вид-во Основа, 2016. - 568 с.

3.3. Internet information resources

3.3.1. <https://www.budjournal.com.ua/>

3.3.2. <https://www.architectmagazine.com/>

3.3.3. <https://adcitymag.ru/tag/konstrukcii/>

3.3.4. <https://www.archdaily.com/>

3.3.5. <https://smp.by/o-nas/nashi-izdaniya/zhurnal-arhitektura-i-stroitelstvo/>


3.3.6. <https://www.architectureanddesign.com.au/magazine>

4. RATING SYSTEM OF KNOWLEDGE AND SKILLS ASSESSMENT

4.1. Evaluation of certain types of work done by students of the points made in accordance with Table 4.1.

Table 4.1.

Kind of Academic Activities	Maximum Grade		Kind of Academic Activities	Maximum Grade	
	Full-time study	Part-time study		Full-time study	Part-time study
semester 4					
Module 1 “Natural building materials”			Module 2 “Artificial building materials and products”		
Carrying out and Defending the laboratories 4×3=12	12	–	Carrying out and Defending the laboratories 12×4=48	48	–
Carrying out the homework	–	–			–
<i>For carrying out a module test 1 a student must receive not less than</i>	–	–	<i>For carrying out a module test 2 a student must receive not less than</i>		–
Carrying out a module test №1	8	–	Carrying out a module test №2	12	–
Total for module №1	20	–	Total for module №2	60	–
Total for modules №1, №2				80	–
Semester examination				20	–
Total for academic discipline				100	

	Quality Management System Course Training Program on «Civil Engineering Materials»	Document Code	QMS NAU CTP 10.01.04-01-2022
		page 15 of 17	

A ***Semester Grade*** is determined (in points and in the National Scale) as a result of performing all kinds of educational work during the semester.

4.2. A student is considered to have passed the module if both his/her Current Module Grade and Module Test Grade are positive.

4.3. The Semester Module Grade is calculated as the sum of the Total Module Grades.

4.4. The Semester Module Grade and the Semester Examination together make up a Total Semester Grade which is calculated according to the National Scale and the ECTS Scale.

4.5. The Total Semester Grade in points, the National Scale and the ECTS Scale is written into a student's record book, for example: ***92/Ex/A, 87/Good/B, 79/Good/C, 68/Sat/D, 65/Sat./E***, etc.

4.6. The Total Semester Grade of the subject is determined as the arithmetic average grade of the total semester grades in points (for the fourth semester for this subject) with its further transfer into the National Scale and ECTS Scale. The indicated Total Semester Grade of the subject is entered in the Diploma Supplement.



(Ф 03.02 – 01)

АРКУШ ПОШИРЕННЯ ДОКУМЕНТА

№ прим.	Куди передано (підрозділ)	Дата видачі	П.І.Б. отримувача	Підпис отримувача	Примітки

(Ф 03.02 – 02)

АРКУШ ОЗНАЙОМЛЕННЯ З ДОКУМЕНТОМ

№ пор.	Прізвище, ім'я, по батькові	Підпис ознайомленої особи	Дата ознайомлення	Примітки

(Ф 03.02 – 04)

АРКУШ РЕЄСТРАЦІЇ РЕВІЗІЇ

№ пор.	Прізвище, ім'я, по батькові	Дата ревізії	Підпис	Висновок щодо адекватності

(Ф 03.02 – 03)

АРКУШ ОБЛІКУ ЗМІН

№ зміни	№ листа (сторінки)				Підпис особи, яка внесла зміну	Дата внесення зміни	Дата введення зміни
	Зміненого	Заміненого	Нового	Анульованого			

(Ф 03.02 – 32)

УЗГОДЖЕННЯ ЗМІН

	Підпис	Ініціали, прізвище	Посада	Дата
Розробник				
Узгоджено				
Узгоджено				
Узгоджено				



(Ф 03.02 – 01)

АРКУШ ПОШИРЕННЯ ДОКУМЕНТА

№ прим.	Куди передано (підрозділ)	Дата видачі	П.І.Б. отримувача	Підпис отримувача	Примітки

(Ф 03.02 – 02)

АРКУШ ОЗНАЙОМЛЕННЯ З ДОКУМЕНТОМ

№ пор.	Прізвище ім'я по-батькові	Підпис ознайомленої особи	Дата ознайомлення	Примітки

(Ф 03.02 – 04)

АРКУШ РЕЄСТРАЦІЇ РЕВІЗІЇ

№ пор.	Прізвище ім'я по-батькові	Дата ревізії	Підпис	Висновок щодо адекватності

(Ф 03.02 – 03)

АРКУШ ОБЛІКУ ЗМІН

№ зміни	№ листа (сторінки)				Підпис особи, яка внесла зміну	Дата внесення зміни	Дата введення зміни
	Зміненого	Заміненого	Нового	Анульованого			

(Ф 03.02 – 32)

УЗГОДЖЕННЯ ЗМІН

	Підпис	Ініціали, прізвище	Посада	Дата
Розробник				
Узгоджено				
Узгоджено				
Узгоджено				