MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

Odesa STATE ACADEMY OF CONSTRUCTION AND ARCHITECTURE

Department of Technology of Building Industry

APPROVED

Vice-rector of the NPR _____ I. Ajaman

"____" _____ 20_____ year.

SYLLABUS
of academic discipline

SELECTION OF EFFECTIVE CONSTRUCTION SOLUTIONS

Educational level	second (master's)	
Training program	selective	
Branch of knowledge	19	Architecture and construction
Specialty	192	Construction and civil engineering
Educational program	Industrial and civil construction	
Scope of the discipline	**4 ECTS credits** (120 academic hours)	
Types of classroom classes	lectures, practical classes, independent work	
Individual and (or) group tasks	Calculation and graphic work	
Forms of semester control	test	

Teachers:

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In the process of studying this discipline, students **GET TO KNOW EFFECTIVE BUILDING SOLUTIONS USED IN MODERN BUILDING PRACTICE.**

For example: The ability to correctly choose the most effective constructive - technological solution and rational technology using modern and advanced experience in the field of scientific research in our country and abroad, to plan the schedule and sequence of construction works.

The prerequisites for studying the discipline are the acquisition of theoretical knowledge and practical skills in the following disciplines:

- Life Safety;
- Materials science;
- Structures of buildings and structures;
- Architectural design.

The goal of the discipline is the formation of future specialists in basic **professional competences:**

- the ability to apply knowledge in practical activities that will help with the solution of issues of choice and application of effective solutions in construction.

Differentiated learning outcomes:

know:

- effective technologies for the construction of underground structures;
- methods of building energy-efficient buildings;
- basics of effective technologies of insulation works;
- the basics of effective solutions when installing translucent structures;
- the basics of using multi-criteria analysis when choosing effective construction solutions.

be able:

- make a rational choice from modern technologies and materials used in the construction of buildings and structures;
- to make effective decisions to solve professional problems in the production of insulation works.
- using the main provisions of effective construction solutions to carry out a selection of materials and technologies for their introduction into technological maps.

THEMATIC PLAN

No	Name of topics	Number of hours			
		lectures	practical	laboratory	independent
1.1	Construction of underground engineering structures	2	0.5		8
1.2	Insulation works (Thermal insulation)	4	2		12
1.3	Insulation works (sound insulation)	2	2		12
1.4	Insulation works (waterproofing)	2	2		12
1.5	Insulation works (anti-corrosion protection)	2	0.5		8
1.6	Arrangement of translucent structures	2	1		12
1.7	Rapidly assembled buildings. Technology of building energy-efficient houses	4	1		10
1.8	Selection of effective solutions in construction based on multi-criteria analysis	2	7		10
	In total	**20**	**16**	**-**	**84**

Calculation and graphic work is provided on the topic "Selection of Effective Construction Solutions".

This work examines various constructive -technological and technological solutions for insulation works, technologies for erecting quick- erect buildings and technologies for erecting energy-efficient buildings.

The student needs to: using the method of multi-criteria analysis, choose and substantiate the most rational constructive-technological or technological solution from the works considered above.

The work consists of one part: calculations and graphing, and is performed in the form of an explanatory note (A-4 format).

Methodological recommendations for the performance of control work [3].

Evaluation criteria and diagnostic tools

The minimum and maximum assessment level for obtaining an "exam" in the academic discipline "Innovations in construction" are 60 and 100 points, respectively, and can be achieved from the minimum and maximum assessments using the following assessment tools:

Evaluation tools		Minimal scores	Maximum scores
type of control	Quantity per semester		
Control work	1	15	20
Thematic survey		15	20
Active participation in practical classes		10	20
Knowledge control:			
- Current knowledge control (standardized tests)	2	20	40
Together		**60**	**100**

Information support

Basic literature

1. Meneilyuk O.I. Materials and technologies of insulation works in construction / O.I. Meneilyuk, I.M. Babii, G.D. Bochorishvili, K.I. Bochevar // Monograph. M 34. Odesa: Publishing House of FOP Bondarenko M.O., 2020. – 492 p.: ill.

2. An extended plan of lectures on the discipline: "Innovations in construction" for students of the "master's" level of education, specialty 192 "Construction and civil engineering", specialization "Industrial and civil construction", full-time and part-time forms of education. Babii I.M. _ Odessa: publishing house OSACEA , 2020-32 p.

3. Methodical instructions from the discipline: "Choosing effective construction solutions" for performing calculation and graphic work for students of the "master's" educational level, specialty 192 "Construction and civil engineering", specialization "Industrial and civil construction" and master's degree holders of OSACEA. OSACEA. Meneilyuk O.I., Nikiforov O.L. _ Stasiuk E.E. _ Odessa: publishing house OSACEA, 20 24 - 5 2 p.

4. Methodical instructions for practical classes and independent work in the discipline: "Innovations in construction" for students of the "master's" level of education, specialty 192 "Construction and civil engineering", specialization "Industrial and civil construction" and master's degree holders of OSACEA. Meneilyuk O.I., Babii I.M., Nikiforov O.L. Odessa: publishing house OSACEA, 2020-47 p.

5. List of regulatory documents in the field of construction. Kyiv, 2018.

6. Zodchiy information reference system.

Auxiliary sources of information

1. Technical regulation in the countries of the European Union. Article Matrosov and Yu. A., website: http://okna.ua/library.

2. The path to the European Union market is not easy. V. Sydenko, A. Baranovsky (Razumkov Center). Internet site: http://www.zn.ua.

3. Technological resources of the state. International scientific and technical communications. Internet site: http :// books . efaculty . kiev _ u.a. _

4. Study guide "Modern roof construction technologies". Lukashenko L.E., Meneilyuk A.I., Kozlyuk E.I., Moskalenko V.I., Petrovskyi A.F. _ Kharkiv: Eden, 2006 г.

5. Educational manual "Modern technologies of floor construction and repair". Meneilyuk A.Y., L.E. Lukashenko. OSACEA, Odessa, 2007.

6. Study guide "Modern facade systems". Meneilyuk A.Y., L.E. Lukashenko, V.S. Dorofeev, etc. Kyiv: Osvyta Ukrainy, 2008.