

Ministry of Education and Science of Ukraine



ODESA STATE ACADEMY OF CIVIL ENGINEERING AND ARCHITECTURE

Civil Engineering Institute
Department of Organization of Building and Labor Protection

SILABUS **educational component – EC 9**

Management of construction and reconstruction. Special course

Educational level	Master's
Field of knowledge	19 Architecture and Construction
Specialty	192 Building and Civil Engineering
Educational program	Industrial and Civil Engineering
Educational component scope	3 credits ECTS (90 academic hours)
Types of classroom training	Lectures, practical classes
Individual tasks	Course project
Forms of final (term) control	credit

Lecturer(s):

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When studying the educational component, higher education students will develop the following skills and competences about basic laws of management in construction and using these laws in management practice. For example: Development of options with elimination of deviations when changes that occurred during construction in comparison with the planned ones are detected tasks and calculation and selection of the most rational solution, taking into account practical ones possibilities of its implementation.

Requirements for studying the educational component: Technology of Construction Production, Organization of Construction, Organization of Construction and Planning.

Program learning outcomes:

PLO 1. The ability to assess the overall efficiency of the construction enterprise.

PLO 2. The ability to use the provisions of regulatory legal acts in the professional field activities; draw up basic business contracts; navigate the licensing process certain types of activities.

PLO 3. The ability to use regulatory and legal acts in everyday and professional life activities; to navigate in scientific, special literature and laws.

PLO 6. Ability to apply systems of organization and execution of preparatory work on workplace; compile a list of measures related to the normative state of the security system and a possible deviation in the extraordinary direction of the production situation; have skills optimal management of several workplaces in matters of industrial safety.

PLO 8. The ability to assess the danger of aggressive influences on building structures and buildings - atmospheric, chemically and biologically active environments, leakage and stray currents, etc., develop and implement measures to protect against them and ensure the necessary durability of structures and buildings.

PLO 15. Perform technical and economic justifications of constructive, technological, organizational solutions for the construction or reconstruction of buildings and structures, to develop technical documentation for projects and their elements.

PLO 17. Ability to consider social, environmental, ethical, economic and commercial considerations affecting the implementation of construction solutions.

PLO 21. Implement effective methods of complex construction management projects with awareness of responsibility for the decisions made and ensuring the quality of work.

Differentiated program learning outcomes:

to know:

- conceptual principles of construction management (rules of management; elements organizations; management information support; management decisions, methods of adoption and stages of their implementation; organization of business meetings; conflict theories, stages of development and styles behavior in conflicts; management functions and their implementation methodology; basic principles, management methods and styles);

to possess:

- the method of designing the organizational structure of the construction organization;
- the method of forming the production program of the construction organization;
- the method of calculating the rational number of management levels;
- methodology for designing calendar plans for the construction of individual objects and complexes;
- methods of managing the construction of individual objects and complexes based on network ones models.

to be able to:

- independently organize the joint activities of the divisions of the construction organization;
- design the organizational structure of the construction organization, form its production structure the program and determine the optimal parameters of its functioning;
- design and implement calendar plans for the construction of individual objects and complexes on their basis, such management functions as planning, control, regulation, analysis and evaluation achieved results.
- make the right choice of supplier and terms of delivery, vehicles and ways of delivery, coordinate delivery processes with production processes, determine rational levels of stocks and their storage conditions;
- analyze economic phenomena and processes, make managerial decisions of economic and of an organizational nature, to be an entrepreneur in production and to run a personal business.

Thematic plan

Topic 1 Organization of management systems

Topic 2 Organization of managerial work

Score criteria and diagnostic tools

The minimum and maximum score for the «credit» in the educational component «Management of construction and reconstruction. Special course» ranges from 60 points to 100 points.

The educational component includes the following task – course project.

The basis for the implementation of the project on the topic is an individual task in the form of a passport of a typical building project, which includes information about basic structural and volume-planning decisions. For a given version of the task with construction of a separate building, a calendar plan for the execution of works and an object plan are being developed budget plan

Methodological recommendations for the implementation of the course project [5].

Term control is carried out in the form of credit. The credit score is set on the basis of the results of the current tasks control during the semester.

Information support
Main sources of information

1. DBN A.3.1-5:2016. Organization of construction production. K., Ministry of Regional of Development, Construction and Housing and Communal Economy of Ukraine, 2016. 49 p.
2. DSTU B A.3.1-22:2013. Determining the construction duration of objects. K., Ministry of Regions of Ukraine, 2014. 39p.
3. Kurgan P.G. Methodical instructions for practical classes in the discipline "Management construction and reconstruction" for students of the "master's" educational level, specialty 192 "Construction and civil engineering" specializing in industrial and civil construction. / P.G. Kurgan–Odesa: ODABA, Department of OB and OP, 2019. 24 p.
4. Kurgan P. G, Synopsis of lectures on the discipline "Construction and reconstruction management" for students of the master's degree in specialty 192 "Construction and civil engineering" specialization "Industrial and civil construction".
5. Posternak I.M., Faizulyna O.A. Methodical guidelines for the implementation of a course project with disciplines "Management of construction and reconstruction" for students of educational level "master" specialty 192 "Construction and civil engineering" specialization industrial and civil construction. / I.M. Posternak, Faizulyna O.A. Odesa: ODABA. 2022. 50 p.

Additional sources of information

1. Kirnos V.M., Zalunin V.F., Dadiverina L.N. Organization of construction. Dnipropetrovsk: Thresholds, 2005. 309 p.