

Estimate work in construction

MODULE HANDBOOK

Field of knowledge:	700000	- Engineering, processing and construction industries
Field of education:	730 000	- Arcitecture and construction
Educational program:	60730300	- Civil Engineering

Module title	<i>Estimate work in construction</i>
Code, if applicable	<i>OCT84</i>
Semester(s) of module teaching	<i>8</i>
Responsible for the module	<i>Zakhidov Nodirjon Dilshodjon oglu, Department of Civil Engineering, Senior Lecturer</i>
Language instruction	<i>Uzbek , Russian</i>
Relation to curriculum	<i>elective</i>
Teaching methods	<i>practical training, independent learning.</i>
Study load (incl. contact hours, self-study hours)	<i>Total hours: 120 hour Auditorium hours: 48 hour practical training – 48hour, independent learning 72 hour</i>
Credit units	<i>4</i>
Required and recommended prior knowledge of studying the module	<i>Building structures, Construction organization and planning, Technology of construction of buildings and structures</i>
Module objectives/intended learning outcomes	<i>The purpose of the module:</i> <i>To develop knowledge and skills in students, including the correct preparation of estimates based on regulatory guidelines when carrying out reconstruction, major repairs and current repairs of buildings and structures under construction or in buildings and structures, study the types of work, determine the time and material consumption for each work according to the standard, and teach methods for formulating estimates.</i> <i>To hold conversations with students about the importance of mastering estimates in construction, in addition, to thoroughly master the fundamentals of estimates in construction, while promoting the technical environment of modeling - analysis, design and knowledge of it.</i> <i>The following requirements are imposed on the knowledge, skills and qualifications of students in the subject. Student:</i> <i>• Within the framework of the issues to be addressed in the process of mastering the subject of construction estimate work, bachelor:</i> <i>• Construction estimate work consists of the widespread introduction of market principles and mechanisms into the system of management and economic relations in capital construction, teaching the organization of competitive bidding (tenders) when placing orders for the performance of design and construction work, etc.;</i> <i>• to have the skills to use modern building materials, construction technologies, machines and mechanisms in calculating the economic part of residential, civil, industrial buildings and designing the reconstruction of their structures;</i> <i>• preliminary assessment of building estimate calculations, determining the size of buildings and structures, reviewing stock and market prices, applying state-established interest rates, determining tax rates and applying them to the estimate document, determining economic criteria for solutions in the design of buildings and structures, working with catalogs, information to be taken into account when performing estimate work (correct selection of S&NQs, variety and sequence of types of work, correct selection of additional building materials). Must</i>

	<i>have skills in using computer programs.</i>
Content	Module 1. Introduction. Purpose and tasks of the discipline. <i>General issues of estimate work.</i> <i>Methods of pricing in construction. Transparent system in capital construction in the Republic of Uzbekistan. Improvement of resource and volume methods of estimation in capital construction. Urban planning norms and rules, construction norms and rules. Basic labor costs and factors influencing their formation. Costs of construction materials, products and structures. Costs of equipment, furniture and inventory. The role of the design estimate document during construction. Formation of costs for the use of machines and mechanisms in determining the cost of construction of the facility.</i> Module 2. Structure and content of the estimate document in construction and areas of their use. <i>Structure and content of the estimate document in construction. Selection of types of work based on the normative document of the State Budget. Structure and content of the local resource register of types of work.</i> <i>About the transparent system and rating. Structure and content of the resource register table, determination of labor costs. Determining the prices of machinery, mechanisms, construction materials and equipment from catalogs. Studying the structure of the correct and other costs, cost accounting tables.</i> Module 3. <i>Formation and determination of the cost of network engineering (water supply, electricity supply, heating and ventilation, etc.) fire safety and other construction sections in the estimate documentation in construction.</i> <i>Calculation of the volume of work in the local resource register. Mechanical methods Calculation of the general estimate of construction work. Drawing up an estimate for internal and external water and sewage networks. Drawing up an estimate for electrical networks. Drawing up an estimate for the heating and ventilation system network Drawing up an estimate for repair work. Determining the cost of a construction object during the implementation of the initial stage of the project. The procedure for determining the cost of construction by contracting organizations at current prices for participation in competitive bidding (proposed price - offer).</i> <i>Structure of the estimate for construction and repair work, basic labor costs and factors affecting their formation</i> Module 4. <i>Determining the estimated cost of repair and reconstruction facilities in construction based on the defect certificate.</i> <i>Drawing up an estimate for the overhaul of a public building. Calculation of work volumes for the local resource register. Selecting a norm for current repairs based on the ShNQ and QMQ. Formation of form-2 and form-3 documents during construction based on the estimate document. Formation of the necessary volumes for the estimate from the project.</i>
Forms of assessment	<i>oral, presentation, written work, practical assignments, and final exams.</i>
Requirements for study and assessment	<i>To successfully complete the module, the student must attend classes and earn the minimum scores set in the current, midterm,</i>

	<i>and final assessments.</i>
Bibliography	1. <i>Pricing and estimating in construction Fergana-2020</i> 2. <i>ShNQ 3.01.01-2022 Urban planning norms and rules "Organization of production in construction"</i> 3. <i>ShNQ 4.02.08-2022 "Brick and block structures"</i> 4. <i>ShNQ 4.02.00-2020 General regulations on the development and application of resource-based estimate norms for construction work.</i>
Reviewers	<i>E.M. Yunusaliyev - Fergana State Technical University, Associate Professor (DSc) of the Department of "Civil Engineering";</i> <i>S.N. Saloxiddinov - Head of the Design Organization of the Limited Liability Company "ROYAL EMERALD PROJECT"</i>