

REPUBLIC OF UZBEKISTAN
MINISTRY OF HIGHER EDUCATION, SCIENCE AND INNOVATIONS
FERGANA STATE TECHNICAL UNIVERSITY

Technology of Building and Construction

MODULE HANDBOOK

Field of knowledge: 700000 – Engineering, processing and construction specialities

Educational field: 730000 – Architecture and construction

Education program: 60730300 – Civil engineering

Module title	<i>Technology for the construction of buildings and structures</i>
Code (if available)	<i>TCBST66</i>
Semester(s) of module teaching	<i>6</i>
Responsible for the module	<i>Abdullaev Ibrohim Numanoch, Department of Civil Engineering, Candidate of Technical Sciences, Professor Yunusaliyev Elmurad Makhammatyakubovich, Department of Civil Engineering, (DSc), Associate Professor Abdurakhmanov Ulugbek Arabjonovich, Department of Civil Engineering, PhD, Senior Lecturer</i>
Language of instruction	<i>Uzbek</i>
Connection to the curriculum	<i>Elective</i>
Teaching methods	<i>Lectures, practical classes, independent work</i>
Study load (including classroom and independent study hours)	<i>Total hours: 180 hours Auditorium hours: 72 hours Lectures – 30 hours, practical classes – 42 hours, independent work – 108 hours.</i>
Credit units	<i>6</i>
Required and recommended prior knowledge for studying the module	<i>Physics, advanced mathematics, strength of materials, structural mechanics and seismic resistance of structures, life safety and occupational safety, construction machinery, construction process technology, etc.</i>
Module objectives/intended learning outcomes	<i>Module objective:</i> <i>The objective of this module is to teach bachelor's degree students the rules for fully complying with regulatory requirements in the design, construction and operation of buildings and structures, as well as to develop students' skills in applying these rules in practice. In addition, the module focuses on studying the basics of designing buildings and structures erected in seismic areas. As part of the course, students learn methods for independently selecting and applying calculations, design principles, spatial planning and structural solutions, as well as cost estimation documentation, ranging from the geological and hydrogeological conditions of the construction site to the stages of restoration and operation of facilities, taking into account all the requirements imposed on them.</i> <i>To achieve this goal, the discipline fulfils the tasks of forming students' theoretical knowledge, practical skills, a methodological approach to the implementation of construction processes, as well as a scientific worldview.</i> <i>Requirements for students' knowledge, skills and abilities in the discipline:</i> <i>The student must:</i> <i>be able to determine the composition of work operations, reasonably select methods for performing construction work and the necessary technical means, including the use of computer technologies; develop technological maps for construction work; determine the labour intensity, the required number of workers, machines, mechanisms, materials, semi-finished products and equipment;</i> <i>be able to measure the volume of work, accept</i>

	completed work, control its quality, draw up schedules for individual types of construction and installation work, and implement various options for methods of erecting buildings and structures, taking into account the specifics of individual and complex types of work; • have the skills to draw up a construction and installation work production plan (PPR).
Content	<i>Module 1. Fundamentals of building and structure construction technologies</i> <i>Sequence of stages in the construction of buildings and structures.</i> <i>Technology for constructing the underground parts of buildings and structures.</i> <i>Technologies for constructing complex underground structures.</i> <i>Technologies for constructing the above-ground parts of buildings and structures.</i> <i>Module 2. Technological methods of constructing buildings and structures from monolithic concrete</i> <i>Complex reinforcement technologies.</i> <i>Comprehensive execution of concrete and reinforced concrete works.</i> <i>Technologies for constructing buildings and structures with large spans.</i> <i>Technologies for constructing buildings with reinforced concrete frames.</i> <i>Module 3. Installation of single-storey industrial buildings with metal frames</i> <i>Technologies for the construction of multi-storey industrial buildings.</i> <i>Technologies for the construction of high-rise buildings.</i> <i>Technologies for the reconstruction of buildings.</i> <i>Technologies for the construction of buildings and structures in extreme conditions.</i>
Forms of assessment	<i>Oral assignments, presentations, written assignments, practical assignments and final exams.</i>
Requirements for study and assessment	<i>To successfully complete the module, students must attend classes and earn a minimum number of points on current, interim and final assessments.</i>
Bibliography	1. Usmonov F.B. <i>Technology of Building and Construction. Parts 1, 2. Textbook.</i> Bukhara, 2021. 2. N. Bozorboev, H.I. Yusupov et al. <i>Technology of Building and Construction. Parts 1, 2. Textbook.</i> Tashkent, 2014. 3. R.A. Narov. <i>Technology of repair and reconstruction of buildings and structures. Study guide.</i> Tashkent, 2019. 4. R.A. Narov. <i>Technology of construction of underground parts of buildings and structures. Study guide.</i> Tashkent, 2019. 5. M.M. Mirakhmedov, H.I. Yusupov et al. <i>Organisation and planning of construction. Textbook.</i> Tashkent, 2022. 6. P.P. Oleynik. <i>Organisation of construction production during engineering preparation of the construction site. Methodological manual,</i> 2018.

	7. N.A. Ponyavina, D.I. Emelyanov. <i>Technology and organisation of construction production</i>. 2021. 8. H.I. Yusupov, A.M. Ilmuradov, A.M. Rakhimov et al. <i>Technology of construction processes. Part 1. Textbook</i>. Tashkent: Innovation-Ziyo, 2021. 9. H.I. Yusupov, R.A. Narov et al. <i>Technology of construction processes, erection of buildings and structures. Part 1. Textbook</i>. Tashkent, 2019. 10. H.I. Yusupov, R.A. Narov et al. <i>Technology of construction processes, erection of buildings and structures. Part 3. Textbook</i>. Tashkent, 2019. 11. R.M. Khadzhaev. <i>Cost management in construction: textbook</i>. T.: TASHI, 2022.
Reviewers	<i>Lecturers:</i> <i>K.I. Maximov — Associate Professor, Department of Civil Engineering, Fergana State Technical University</i> <i>D.T. Abdukarimov — Director, Gulshan LLC</i>