საქართველოს ტექნიკური უნივერსიტეტი
GEORGIAN TECHNICAL UNIVERSITY

Approved by
Resolution # 733 of the
Academic Council of GTU
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dated April 12, 2023

Bachelor's Educational Program

Program Title

მშენებლობა
Construction

Faculty

სამშენებლო
Civil Engineering

Program Head/Heads

Professor Malkhaz TSIKARISHVILI

Qualification to be Awarded and the Extent of the Program in terms of Credits

Bachelor in Construction Engineering

The bachelor's qualification is awarded by combining at least 230 credits of education courses and at least 10 credits of free components corresponding to the main field of study.

Language of Teaching

Georgian

Prerequisite for Admission to the Program

Only a person with a state certificate confirming complete general education or a document equivalent to it, who is enrolled according to the procedure established by the legislation of Georgia, has the right to study at the bachelor's level.

Program Description

Program volume in credits:
A student must accumulate at least 240 credits in order to obtain the academic degree of Bachelor in Construction Engineering within the framework of the undergraduate educational program "Construction", which ensures

that the program objectives and relevant learning outcomes are achieved at the undergraduate descriptor level of the Higher Education Qualifications Framework.
The program is designed according to the European Credit Transfer System (ECTS), 1 credit equals 25 hours and includes contact and independent work hours. The distribution of credits is presented in the curriculum.

Study duration:
The duration of the program is determined by at least 4 years (8 semesters), the semester includes 20 weeks.
There are 15 academic weeks (auditory classes) and 5 sessional (mid-semester, final and additional exams) during one semester at GTU.

Structure of the educational program:
The bachelor's degree program in construction consists of a combination of at least 230 credits of educational courses relevant to the main field of study and at least 10 credits of independent components.

Courses of content corresponding to the main field of study, in turn, include compulsory and elective components.
The volume of compulsory components is a total of 192 credits;
Elective components are presented in the program as follows:

1. Compulsory elective foreign language I (English, German, French, Russian) - total - 15 credits; - in I, II and III semesters - 5 credits;
2. Elective humanitarian components: 3 credits - 2nd semester;
3. Elective courses of the main field of study 15 credits in the 7th semester and 5 credits in the second semester.

Instructions for choosing an elective component:

The process of choosing both free components and elective courses related to the profession should be transparent; In order to define his/her own profile, the student should be provided with the necessary information, consultation and assistance. For this purpose, the dean's office of the faculty has a person with relevant qualifications and experience who will provide qualified assistance to students regarding the elective components. If necessary, the head of the relevant department is involved in the consultation process.

Before the start of the semester, each student of the program is sent information about the education courses to be chosen and the method of selection of courses on his/her personal page created on the GTU e-learning portal and also by text message to the contact phone. If there is a competition for a specific elective component, priority is given to a person with a high academic performance, while a person with a low academic performance is registered for the next elective course in the order chosen by him/her.

The instruction on the management of the educational process of the Georgian Technical University provides information on the organization of the educational process, the selection of components of the educational program, the assessment of student achievements, the appeal of the assessment of study results, educational and financial agreements with students, and the accumulation of credits by students (see https://gtu.ge/Study - Dep/Forms/Forms.php)

Program Objective

Objective 1: To provide the graduate with knowledge of the ways and methods of performing the basic construction technologies for the construction, installation and equipping of public, commercial, industrial and residential structures, to provide the graduate with knowledge of the rules for selecting the necessary construction vehicles, safe conduct of work, quality control of work performance, maintenance technologies of building structures, and construction organization and management.

Objective 2: With broad knowledge of the field of construction engineering, in accordance with predetermined guidelines, to provide graduates with the ability to implement construction projects of a practical nature, taking into account environmental protection, safety and well-being determining requirements, global, cultural, social, environmental and economic factors;

Objective 3: To create a solid foundation for the graduates to continue studies to the next level of education and to ensure continuous professional development, in order to contribute to the smooth operation of the construction complex with the obtained education.

Learning Outcomes/Competences (general and professional)

1. With extensive knowledge of the field of construction engineering, he/she critically thinks about the theories and principles of the field;
2. Explains some of the latest aspects of construction engineering, which involves the technology and techniques of installation, construction and maintenance of public (community), commercial, industrial and residential structures (as well as their equipment);
3. In the field of construction engineering, using cognitive and practical skills, standard and some of the latest methods, solves such complex and unforeseen problems that meet the defining requirements of environmental protection, safety and well-being of the population, taking into account global, cultural, social, environmental and economic factors;
4. In accordance with predetermined guidelines, plans and conducts an experiment, implements a project of a practical nature, using standard, some of the latest methods, and with professional judgment interprets the analysis of the received data and formulates appropriate conclusions;
5. In compliance with ethics, labor and safety norms, selects building materials, technologies and techniques in construction engineering, participates in the implementation of construction processes, installation of structural elements, construction and equipping of buildings, construction quality control, evaluation and technical expertise;
6. Understanding the peculiarities of construction tenders, contracts and professional licensing, explains construction management issues and analyzes situations, based on knowledge of construction economics, construction organization and management, as well as business principles;
7. With an audience of specialists and non-specialists, in forms appropriate for the context, using information and communication technologies, produces clear and understandable communication about ideas related to the field, existing problems and ways to solve them;
8. With his/her own responsibility and compliance with the principles of work ethics, he/she is involved in activities focused on the development of the team, with the members of which he/she participates in the creation of a cooperative environment and the fulfillment of the set tasks;
9. Plans continuing professional development, identifies own further learning needs and implements it with a high degree of independence.

Methods of Achieving Learning Outcomes (teaching-learning)

☒ Lecture ☒ Seminar (group work) ☒ Practical ☒ Laboratory
☒ Practice ☒ Course work/Project ☒ Consultation ☒ Independent work

Activities corresponding to teaching-learning methods: Discussion/debate, Cooperative learning, Collaborative work, Problem-based learning (PBL), Case study, Brain storming, Demonstration method, Inductive method, Deductive method, Method of analysis, Synthesis method, Verbal or oral method, Writing work method, Explanatory method, Activity-based learning, Project development and presentation.

In the learning process, depending on the specifics of a particular study course program, the following activities of the teaching-learning methods are used, which are outlined in the relevant study course programs (syllabi).

Student's Knowledge Assessment System

The student's knowledge is assessed on a 100-point scale.
Positive grades are:

- (A)-Excellent - 91-100 points;
- (B)-Very Good – 81-90 points;
- (C)-Good – 71-80 points;
- (D)-Satisfactory – 61-70 points;
- (E)-Sufficient – 51-60 points.

Negative grades are:

- (FX) - Failed to pass – 41-50 points, which means that the student needs more work to pass and is allowed to take an additional exam once with independent work;
- (F) - Failed - 40 points or less, which means that the work done by the student is insufficient and he/she will have to study the subject again.

In case of FX in the component of the educational program, GTU is obliged to schedule an additional exam at least 5 days after the announcement of the results of the final exam.

The number of points obtained in the final assessment is not added to the grade received by the student in the additional exam.

The grade obtained on the additional exam is the final grade and is reflected in the final grade of the educational program component.

In case of receiving 0-50 points in the final exam of the educational component, or if the student fails to overcome the minimum competence limit in the final/additional exam, the student will be assigned a grade of F-0.

The program part of the assessment of the level of achievement of the student's learning results in each component consists of an intermediate assessment and a final exam. The mid-term assessment in turn includes the ongoing activity and the mid-semester exam.

Each assessment form and component have a specific share in the final assessment from the total assessment score (100 points). In particular, the maximum score of the intermediate assessment is no more than 60, and the maximum score of the final exam is no less than 40.

Each form of assessment includes an assessment component/components, which includes an assessment method/methods, and the assessment method/methods are measured by assessment criteria.

The right to sit for the final exam is given to the student who, in the component(s) of the intermediate evaluation, has accumulated at least the minimum positive evaluation in accordance with the program of the education course (at least 30 points in total), and at the same time completed and submitted on time the minimum amount of work defined by the program in the form of documentary material.

Detailed information is available on the GTU web page: "Instructions for managing the educational process at the Georgian Technical University".

Fields of employment

Graduates will be able to be employed in various positions in the construction of public (community), commercial, industrial and residential structures (as well as their equipment) (industrial, administrative, public and residential buildings, road and airfields, railways, bridges, tunnels, water supply systems and hydrotechnical structures). Graduates will work in construction companies and corporations, engineering consulting, supervisory and inspection firms, government agencies, municipalities and ministries in infrastructural, supervisory and urban development services according to competence.

Opportunities for continuing education

Master's degree educational programs

Human and material resources needed to implement the program

The program is provided with appropriate human and material resources. Additional information is provided in the attached documentation.

Number of attached syllabi: 137