საქართველოს ტექნიკური უნივერსიტეტი
GEORGIAN TECHNICAL UNIVERSITY

Approved by
Resolution № 01-05-04/138 of the
Academic Council of GTU
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dated October 7, 2021

Bachelor's Educational Program

Program Title

სამოქალაქო ინჟინერია
Civil Engineering

Faculty

სამშენებლო
Civil Engineering

Program Head/Heads

Professor Aleksandre BAGRATION-DAVITASHVILI

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

Bachelor of Science in Civil Engineering Bachelor's qualification is awarded by combining at least 235 credits of education courses of the relevant content of the main field of study and at least 5 credits of free components.

Language of Teaching

Georgian

Prerequisite for Admission to the Program

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

Program Description

Program volume in credits:
In order to obtain the academic degree "Bachelor of Science in Civil Engineering" within the framework of the undergraduate educational program "Civil Engineering", the student must accumulate at least 240 credits, which ensures the achievement of the program objectives and corresponding learning outcomes at the level corresponding to the bachelor's level descriptor 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 educational program includes compulsory components of the content corresponding to the main field of study - in total - 182 credits, compulsory elective components of the content corresponding to the main field of study - a total of 53 credits and free components - 5 credits.

Compulsory components of the content corresponding to the main field of study include - compulsory courses of content corresponding to the main field of study (172 credits in total), undergraduate practice - 5 credits and a bachelor's project with the volume of 5 credits.

Compulsory elective components of the content corresponding to the main field of study are:

- Foreign language (English, German, French, Russian) - includes a total of 20 credits, which are included in the curriculum as follows: I semester - 5 credits; II semester - 5 credits; III semester - 5 credits; IV semester - 5 credits;
- Elective humanitarian components - with the amount of 3 credits, which is provided by the curriculum in the first semester and includes the following courses: introduction to psychology, basics of philosophy, basics of politics, introduction to sociology, history of Georgia, cultural studies.
- Compulsory elective courses of the main field of study - in total include 30 credits, which are provided in the curriculum as follows: in the seventh semester in two elective blocks, each with a volume of 6 credits, and in the eighth semester in three optional blocks also with a volume of 6 credits each.

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 evaluation of student achievements, the appeal of the evaluation of learning results, the study and financial agreements with students and the accumulation of credits by the student, the conduct and evaluation of practice, the procedure for completing the undergraduate research project/thesis. See detailed information at the following email address (see https://gtu.ge/Study-Dep/Forms/Forms.php)

Program Objective

Objective 1: To teach graduates modern approaches to civil engineering project management, identifying and solving engineering problems in the field, the latest technical means and technologies, using the fundamental theses of natural sciences and mathematics.

Objective 2: By understanding the fundamental scientific issues of civil engineering, to educate practicing and innovative engineers who, using appropriate theoretical knowledge and professional competencies, will be able to participate and make their own contribution in overcoming social, technical and business challenges in the field of civil engineering.

Objective 3: To provide graduates with a solid foundation for continuing their studies in the field of civil engineering and continuing professional development.

Learning Outcomes/Competences (general and professional)

1. With a broad knowledge of the fundamental theories of engineering, natural sciences and mathematics, he/she critically thinks about the theories and principles of the field;
2. Explains some of the latest aspects of civil engineering, which involves the planning, design, testing and construction management of buildings and structures;
3. In the field of civil engineering, using cognitive and practical skills, standard and some of the latest methods, observing the norms of ethics, labor and safety, solves such complex and unforeseen problems that meet the requirements determining the protection of the environment, safety and well-being of the population;
4. In accordance with predetermined guidelines, plans and conducts experiments, implements practical projects, analyzes and interprets data, uses them to formulate appropriate engineering assessments and conclusions
5. With the audience of specialists and non-specialists, in forms appropriate for the context, using information and communication technologies, produces clear and understandable communication regarding the ideas related to the field, the existing problems and ways to solve them;
6. Involved in interdisciplinary team activities, with members of which creates a collaborative environment to accomplish set tasks;
7. 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 find employment in the construction of civil structures, construction of hydrotechnical structures, in construction-design-construction firms, construction services of municipalities, municipalities and ministries, in construction and development firms, in construction export bureaus, in examination and testing laboratories, in enterprises manufacturing building materials and goods, in quarries extracting building materials, in water treatment plants of water supply and drainage systems, in communal services of city municipalities, water supply - in water profile design organizations, railways, highways, water supply systems, hydro-electric energy systems construction specialized firms and other entities. (The graduate will be employed in the positions provided by the qualification granted by the program).

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: 75