საქართველოს ტექნიკური უნივერსიტეტი
GEORGIAN TECHNICAL UNIVERSITY

Bachelor's Educational Program

Program Title

კომპიუტერული მეცნიერება
Computer Science

Faculty

ინფორმატიკისა და მართვის სისტემების ფაკულტეტი
Faculty of Informatics and Control Systems

Program Head/Heads

Professor Lili PETRIASHVILI

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

The qualification "Bachelor in Computer Science" will be awarded by combining the main specialty (220 credits) and free components (20 credits) in the educational program, if at least 240 credits are completed

Language of Teaching

Georgian

Prerequisite for Admission to the Program

Only the holder of a state certificate proving complete general education, or an equivalent person enrolled in accordance with the procedure established by Georgia law, shall have the right to study at the Bachelor's Educational Program.

Program Description

The content of the program, teaching methods and the number of credits of the education courses ensure the achievement of the objective and results of the program.

The duration of the program is 4 years (8 semesters, 60 credits per year) and includes compulsory and elective courses of the specialty, together with a bachelor's project and free components for a total of 240 credits. The computer science bachelor's program was developed taking into account the international ABET accreditation standards, as well as based on the experience of the computer science bachelor's programs of the leading universities of the world and Georgia.

When developing the program, the requirements of the local and international employment market were taken into account, which offers our graduates a wide range of employment opportunities.

An important component of completing the program is the presentation of a bachelor's project, which the student completes on the basis of the lecturer's consultation. The thesis should present a real product created by the student and its final presentation. In order to ensure success, students have the opportunity to practice in different organizations and work in the direction they are interested in before presenting the paper. At each stage of project creation, students will receive qualified consultations, both through a mentor and a lecturer assigned to the organization. In the process of working on the thesis, students gain such knowledge and experience as: the ability to work in a team, communicate with customers, conduct negotiations, identify a problem, work on creating a product and make presentations. One of the most important values of the undergraduate project is that it allows students to create a real product for real companies before graduation and thereby establish early relationships with future employers and/or customers, which is one of the unconditional means of their employment.

Program Objective

The objective of the Bachelor's program "Computer Science" is to prepare competitive specialists, whose graduates will be able to:
- Logically and methodologically solve the main tasks of the field of computer science in accordance with the requirements of the international and local labor market;
- Analyze practical tasks based on extensive knowledge of the field and use of practical skills, correctly plan and obtain optimal results by selecting appropriate algorithms;
- Develop practical skills with the acquired knowledge in order to plan and create software as a separate component as well as a complex system for their further management in accordance with pre-existing instructions or specific instructions in the field of computer science;
- Contribute to both professional and community development by adhering to the ethics of computer science and with high responsibility.

Learning Outcomes/Competences (general and professional)

- Determines current achievements in the field of computer science, interpretation of some theories, methods and principles in accordance with international and local labor market requirements;
- Considering the existing instructions to solve different types of tasks, analyzes computer system software, operation, service and implementation issues;
- Possesses the necessary knowledge in the field of computer science, with the help of which he/she participates in the collection of data specific to the field of computer science and their analysis, as well as in providing data programmatic, technical, organizational and informational security processes;
- Is involved in multidisciplinary teamwork, develops ways to identify existing problems and solve them;
- Demonstrates the use of information and communication technologies, on the basis of which he/she searches for information from various sources, processes and presents the results;
- Realizes the need for further education, both for the purpose of professional self-development, as well as taking into account modern requirements, the existing environment and priorities;
- Based on legal and ethical principles, he/she will develop and make a reasoned decision, taking into account professional responsibility.

Methods of achieving learning outcomes (teaching-learning)

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

In the learning process, depending on the specifics of a particular education course, the following relevant activities of the teaching-learning methods are used, which are reflected in the programs (syllabi) of the relevant education course:

Activities corresponding to teaching-learning methods:

- Discussion/debate
- Group (collaborative) work
- Case studies
- Demonstration method
- Analysis
- Synthesis
- Verbal, i.e. oral method
- Written work
- Explanation
- Action-oriented learning
- Project development and presentation

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, an additional exam is held, not less than 5 days after the announcement of the results. The mark obtained in the additional exam is not added to the mark obtained in the final assessment
Detailed information is provided on the GTU website: Instruction for managing the educational process at the Georgian Technical University.

Fields of employment

Graduates with the qualification/compensation of Bachelor in Computer Science will be able to find employment in: state management bodies, educational institutions, organizations of various forms of ownership, in the fields of economics, management and financial activities, medical services, energy and economic organizations, environmental protection, agriculture, business, metallurgical and chemical Industry, construction and other industrial objects; Also banking organizations, research institutes, planning and design organizations.

Opportunities for continuing education

Master's degree educational programs

Human and material resources needed to implement the program

The program is provided with adequate human and material resources. For additional information, please find the attached documentation.

Number of attached syllabi: 74