Prerequisite for admission to the program

Only a holder of a state certificate confirming complete general education or an equivalent person who is enrolled in accordance with the rules established by the legislation of Georgia has the right to study in the Bachelor's English-language educational program.

The applicant must pass national exams in the following subjects: mathematics or physics, Georgian language, and English language.

The minimum competency threshold for applicants to be enrolled in the program is 50% of the result obtained in the Unified National Exams in English.

Enrollment in the program is also possible through internal and external mobility in accordance with the regulations established by the Ministry of Education and Science of Georgia and the Georgian Technical University.

Enrollment in the program without passing the Unified National Exams is possible in accordance with the rules established by the Ministry of Education and Science of Georgia.

Program Objective

- Graduates of the program will effectively apply computational techniques and algorithmic principles to address real-world challenges in various domains by designing and developing data-driven solutions for complex problems in both industry and academia.
- Graduates will demonstrate ethical and professional conduct, understanding the societal impact of computing solutions, and adhering to ethical principles in their professional practice.
- Graduates will pursue lifelong learning and professional development through advanced degrees, certifications, or self-guided exploration of emerging technologies, staying at the forefront of advancements in the field of computer science.

Learning outcomes/competences (general and vocational)

1. **Analyze** a complex computing problem and to apply principles of computing and other relevant disciplines to **identify** solutions.
2. **Design**, **implement**, and **evaluate** a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.
3. **Communicate** effectively in a variety of professional contexts.
4. **Recognize** professional responsibilities and **make** informed **judgments** in computing practice based on legal and ethical principles.
5. **Function** effectively as a member or leader of a team engaged in activities appropriate to the program's discipline.
6. **Apply** computer science theory and software development fundamentals to produce computing-based solutions.

Student knowledge assessment system

Grading system is based on a 100-point scale.

Positive grades:
(A) - Excellent - grades between 91-100 points.
(B) – Very good - grades between 81-90 points
(C) - Good - grades between 71-80 points
(D) - Satisfactory - grades between 61-70 points
(E) - Pass - the rating of 51-60 points

Negative grades:
(FX) - Did not pass - grades between 41-50 points, which means that the student is required to work more to pass and is given the right, after independent work, to take one extra exam;

(F) – Failed - 40 points and less, which means that the work carried out by the student did not bring any results and he/she has to learn the subject from the beginning.

In case of receiving FX, an additional exam is scheduled no later than 5 days after the results are announced. The grade received in the additional exam is not added to the score received in the final assessment.

A student who does not agree with the evaluation of the study results, has the right, within five working days from the notification of the result of the evaluation, to appeal to the dean with a reasoned complaint and request a revision of the results. link: https://gtu.ge/pdf/forms-instructions/appeal-restore.pdf

Detailed information about the assessment system is provided on the GTU website: Instruction on the Management of the Educational Process at the Georgian Technical University, link: https://www.gtu.edu.ge/uploads/2026/08/educational-process2.pdf

Subject	credit
Engineering Mathematics 1.1	5
General Physics A2	4
Fundamentals of Computer Architecture and Organization	5
Fundamentals of Algorithmization and Programming Elements	6
Ethics and Social Responsibility in Technology	5
Foreign Language 1 (General Elective)	
Georgian language-1 (for non-Georgian speakers)	5
Foreign Language (English) – B2 +1	
Engineering Mathematics 2.1	5
General Physics B2	4
Operating Systems Fundamentals	5
Object-Oriented Programming -1 (based on C++ - C#)	5

Fundamentals of Database systems	6
Foreign Language 2 (General Elective)	
Georgian language-2 (for non-Georgian speakers)	5
Foreign Language (English) – B2 + 2	
Engineering Mathematics 3.1	5
Object-Oriented Programming 2 (based on Java)	5
Database management system – Oracle	6
Fundamentals of Probability Theory	5
Optimization methods	5
Science (General Elective)	
General Physics C2	4
General Chemistry A	
Elements of Academic Writing	3
Introduction to Computer Networks	6
Programming in Python	5
Basics of Web Technologies	5
Discrete Mathematics	6
Statistical Models and Simulation by SPSS	5
Computer Architecture	4
Fundamentals of Information security	6
Human-Computer Interaction	4
Data structures and algorithms	4
Fundamentals of Artificial Intelligence	6
Program Electives 1	6
Computer Network Organization	
Distributed Database Systems	

Business Intelligence for Decision Making	
Web Application Development Using ASP.NET MVC Framework	
Data Mining and Knowledge Discovery for Big Data	6
Big Data Fundamentals	6
Machine Learning	6
Program Electives 2	
Data Warehousing Fundamentals	6
Computer Systems Modernization and Service	
Grid Computing	
Program Electives 3	
Geographic Information Systems (GIS) Fundamentals	6
Artificial Intelligence in Web sites	
Blockchain and Cryptocurrency	
Big Data Storage and Processing System Hadoop	6
Cybersecurity mechanisms and methods	4
Internship – (Computer Science)	6
Building Mobile apps	5
Computer graphics and interactive techniques	4
Program Electives 4	
General Paradigms of Genetic Algorithms	5
Cognitive Computing and Big Data Analytics	
Cloud Computing	
Knowledge Representation and Reasoning	
Internet of Things	
Final Project	10
Free Electives	20

Total	**240**