BACHELOR'S EDUCATIONAL PROGRAM

Program Title

Computer Engineering

Faculty

Informatics and Control Systems

Qualification to be Granted and Programme Capacity

Bachelor in Computer Engineering
Programme capacity – 240 credits.

Teaching Language

English

Programme Fee

Paid programme. Tuition fee – 2250 GEL.

About the Programme

Computer engineering focuses on the theoretical and practical issues of analyzing and designing complex digital systems. It covers a very wide range of digital technologies, from supercomputers and computer systems to microcircuits. It can be said that at the current stage of high technology development, computer engineering plays a decisive role in the fields of digital technologies and applied nature. Therefore, the demand for computer engineering specialists in the labor market is very high and constantly growing.

Third obligatory subject for admission to the programme – Physics or Mathematics.

Foreign language – English.

Admission Prerequisites to the Program

An applicant has the right of studying on foreign educational program when he/she has the permission in accordance with Georgian Legislation. To be admitted to the CE program at GTU, students must:

1. Pass the Unified National Examinations, which include Mathematics or Physics, English (with a minimum of 50% + 1 of the maximum score), Georgian Language and Literature as a required subject, organized by NAEC.
2. Obtain sufficient scores to secure admission to the program at the faculty of Informatics and Control Systems.

Program Educational Objectives

Within three to five years after graduation our alumni:

- with broad technical, engineering knowledge and skills will have advanced their careers in the field of computer engineering (PEO 1).
- will effectively use advanced methods and tools from the field of computer engineering in other fields (PEO 2).
- will pursue further education and continuous professional development (PEO 3).

Learning Outcomes / Competencies (General and Professional)

Graduates of the program are expected to attain the following outcomes by the time of graduation:

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
3. An ability to communicate effectively with a range of audiences.
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Student's Knowledge Assessment System

The 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 acceptance of FX, an additional exam is prescribed, at least 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.

A student who does not agree with the evaluation of the study results has the right to appeal to the dean with a reasoned complaint and request a revision of the results within five working days of being informed of the results of the evaluation.

Detailed information is provided on the GTU website: Instruction for managing the educational process at the Georgian Technical University https://www.gtu.edu.ge/uploads/2026/03/educational-process2-1.pdf

Courses in the Program

#	Courses	Credits
1	Engineering Mathematics 1	6
2	Digital Literacy (CEN)	5
3	Introduction to Computer Engineering (CEN)	4
4	Data Structures and Algorithms (CEN)	6
5	Computer Engineers Graphics – INF	4
	Electives 1 (Humanitarian Block)	
6.1	Georgian Language (CEN)	5
6.2	History and Culture of Georgia	
6.3	Sociology	

#	Courses	Credits
7	Engineering Mathematics 2	7
8	Physics 1 (CEN)	8
9	Theory of Switching Circuits (CEN)	9
10	Introduction to Programming (CEN)	4
11	Specialized English Language (CEN)	5
	Electives 2 (Humanitarian Block)	
12.1	Principles of Economics	5
12.2	Introduction to Philosophy	
13	Discrete Mathematics	6
14	Physics 2 (CEN)	6
15	Computer Architecture I (CEN)	6
16	Object Oriented Programming (CEN)	5
	Free Components 1	5
17	Physics 3 (CEN)	6
18	Computer Architecture II (CEN)	6
19	Operating Systems (CEN)	5
20	Electronics (CEN)	5
21	Computer Networks (CEN)	5
22	Database Design (CEN)	5
23	Human-Computer Interaction (CEN)	5
24	Digital Circuits Engineering (CEN)	6
25	Digital Signal Processing (CEN)	5
26	Object Oriented Programming and Applications (CEN)	5
27	Intelligent Sensors (CEN)	6
28	Fundamentals of Cybersecurity (CEN)	5
29	Computer Network Administration (CEN)	5
30	SCADA Systems Design (CEN)	5
31	Microcontrollers Architecture (CEN)	6
	Professional Electives 1	
33.1	Creation and Management of Websites (CEN)	4
33.2	Organization of Computer Peripherals (CEN)	
	Free Components 2	5
34	Internship Practice (CEN)	6
35	Introduction to Capstone Design Project (CEN)	4
36	IoT Systems (CEN)	5
37	Communication Networks Organization (CEN)	6
38	Embedded Systems (CEN)	6
39	Creative Thinking Basics (CEN)	4
40	Capstone Design Project (CEN)	6

#	Courses	Credits
41	Cloud and Grid Technologies (CEN)	5
	Professional Electives 3	
42.1	Upgrade and Service of Computer Systems (CEN)	4
42.2	Construction and Production of Computer Systems (CEN)	
	Professional Electives 4	
43.1	Small Business Management (CEN)	4
43.2	Engineering Ethics (CEN)	
	Free Components 3	5
	Free Components 4	5