

Caucasus University



კავკასიის ტექნოლოგიების სკოლა  
CAUCASUS SCHOOL OF TECHNOLOGY

Undergraduate Program in  
Electronics and Computer Engineering



<b>Program Name</b>	Electronics and Computer Engineering
<b>Program Name in Georgian</b>	ელექტრონიკა და კომპიუტერული ინჟინერია
<b>Degree level</b>	Bachelor's
<b>Type of the educational program</b>	Academic
<b>Language of Instruction</b>	Georgian
<b>Expected Qualification and Code</b>	
In Georgian:	ელექტრონული ინჟინერიის ბაკალავრი, 0714
In English:	Bachelor of Electronic Engineering, 0714
<b>Date of Program Approval</b>	2 June 2017
<b>Academic head of the Program</b>	Porfessor Nodar Ugrelidze, PhD.
<b>Program Volume in Credit Hours</b>	
<p>The Bachelor's Degree Program in Electronics and Computer Engineering comprises 240 credits. 1 ECTS equals to 25 hours, which includes class hours and time spent on independent work (midterm and final examinations, as well as homework assignments).</p> <p>Consequently, the standard official duration of the Bachelor's Degree Program is four years, but maximum six years. After expiration of the standard duration of the Bachelor's Degree Academic Program, the students having academic debts, with the view of completing the program, are allowed to continue education through additional semesters by retaining the student's status.</p> <p>The program envisages a narrow sphere and free components learning courses:</p> <p><u>Learning courses of narrow sphere (199 ECTS credits):</u></p> <ul style="list-style-type: none"><li>- Mandatory learning courses -170 ECTS</li><li>- Optional learning courses - 29 ECTS</li></ul> <p><u>Learning courses of free component (58 ECTS credits):</u></p> <ul style="list-style-type: none"><li>- Mandatory learning courses of university - 20 ECTS</li><li>- Optional learning courses of university - 15 ECTS</li><li>- Free credits - 6 ECTS</li></ul>	

## Program Description

### Admission Requirements

- Any person having a secondary education is entitled to enroll in the Undergraduate Program in Electronics and Computer Engineering.
- The precondition for admission to the program is to pass the Unified National Examination. Any exceptions to the Law on Enrolment at Higher Education Institutions are allowed only in the cases prescribed by Law.
- At the national exams, it is mandatory to pass the mathematics or physics exam from the optional subjects.
- A person authorized to enroll in the program without passing the unified national exams passes an internal exam in mathematics or physics established by the university.
- Mobility to the program is allowed in accordance with the procedures set by the relevant law.

### Program Objectives

The objectives of the Program in Computer Science are to:

- To give the student the opportunity to get a broad knowledge of the field of electronics and automation, which prepares a person for further studies in the master's degree and/or work with the received qualifications through research programs.
- The student will acquire knowledge based on fundamental theories and principles of mathematics, electronic and computer engineering, which will enable him to plan, design and develop electronic and computer systems and devices.
- To prepare high-level, competitive specialists with broad theoretical knowledge and practice-oriented, transferable skills, which are necessary for professional activities in the field of modern electronics and automation

### Learning Outcomes

Upon completion of the Bachelor's degree program in Computer Science, the graduate will acquire the following competencies:

1. Describes the basic concepts of electronics and computer engineering. Explains the theoretical aspects of the field based on a broad theoretical knowledge of mathematics, physics and engineering.
2. Describes the principles of computer system and network operation and security.
3. Processes, selects and uses electro-technical system and software to solve complex engineering tasks.
4. Effectively uses modern electronic and computer systems modeling tools.
5. Performs programming of microprocessors, microcontrollers and signal processors. In practice, he uses the latest programming methods and technological tools.
6. Selects the areas of use of communication systems and evaluates the possibilities of using the communication system. Uses standard and modern means and methods to ensure the security of communication systems.
7. Appreciates the development-oriented learning process, the importance of constantly updating professional knowledge and the need to acquire new knowledge, carries out oral and written communication.
8. Appreciates and shares with others the values, ethical and social responsibility related to electronic communication technologies.

### Building a Career

#### Internships and Job Placements

The program structure allows students to be "job ready" early in the program and offers opportunities for career advancement. Students will be offered to be part of the coordinated internship programs or get a job placement through the support of the CU Career Center.

#### Career Opportunities

The obtained degree will allow the graduate to be employed in various types of organizations, be it a government structure, a private business company, a non-governmental organization or others.

After completing the program, the graduate will be able to find employment in the field of electrical equipment production, in Internet-providing and communication companies, in organizations that use management systems built on modern electronic modules, as well as in all companies whose field of activity is telecommunications, electrical engineering, and computer technologies.

### Study Continuation Opportunities

The program graduates can continue their studies at any of Master's Degree programs in Georgia or abroad, in accordance with the regulation required by the law.





№	Code	Prerequisite	Course	Year								ECTS	
				I		II		III		IV			
				Semester									
I	II	III	IV	V	VI	VII	VIII						
55.	ELC 4244	TELC 3245	Communication Technologies									x	6
<b>Learning courses of free component</b>													
Mandatory learning courses of university - 20 ECTS													
56.	CIS 1140		Computer Skills and Office Applications	x									5
57.	ACWR 0007		Academic Writing	x									5
58.	ENGL 0007	ENGL 0006	General English B2.0	x									5
59.	ENGL 0008	ENGL 0007	General English B2		x								5
Optional learning courses of university - 20 ECTS													
60.	ENGL 0009	ENGL 0008	General English C1.0			x							5
61.	ENGL 0010	ENGL 0009	General English C1				x						5
62.	ENGL 0005		General English B1.0 <sup>1</sup>	x									5
63.	ENGL 0006	ENGL 0005	General English B1		x								5
64.	MATH 0001		PreCalculus <sup>2</sup>	x									5
65.	HIST 0001		Introduction to World History & Civilization	x									5
66.	POLS 0002		Political Science									5	
67.	HIST 0003		History of Georgia									5	
68.	SOCI 0004		Sociology									5	
69.	PHIL 0005		Philosophy									5	
70.	PSYC 0006		Psychology										
71.	ENTP 0009		Entrepreneurship									5	
Free credits - 18 ECTS													
72.			Free Course <sup>3</sup>									x	
ECTS Per Year				60	60	60	60						
Courses Per Year				12	12	10	9						

<sup>1</sup> General English Language B1 Level is mandatory for those students who have competency lower, than the Level B2.

<sup>2</sup> "PreCalculus" is mandatory for those students who have low competency in Math.

<sup>3</sup> Student can take courses in terms of "Free Course" from the other Bachelor's degree programs and/or form the Elective Specialization Courses in this program.