



Caucasus International University

Tbilisi, 2024

Faculty of Business and Technology

Bachelor's degree educational program

Information Technologies

Program

Approved at the session of the Academic Council

Minutes # 04-2023, 10 November, 2023

Resolution N 08-23, 10 November, 2023

1. Name of the educational program

Bachelor's Degree Program in Information Technologies

2. Cycle of higher academic education

Bachelor

3. Type of the educational program

Academic Higher Education Program

4. Broade field

Information and Communication Technologies

5. Narrow field

Information and Communication Technologies

6. Detailed field

0612 Design and administration of databases and networks

7. Field of study

0612.1.1 Information Technologies

8. Program volume in credits

240 credits

9. Duration of studies

4 years, 8 semesters

10. Teaching form

Full-time

11. Language of instruction

English

12. Qualification to be awarded

Bachelor of Information Technologies

13. Program Supervisors

Giorgi Kakashvili, Doctor of Engineering in Informatics, Professor of the Faculty of Business and Technology of the Caucasus International University;

Giorgi Basiladze Doctor of Engineering, Associate Professor of the Faculty of Business and Technology of the Caucasus International University.

14. Prerequisite for admission to the program

Citizens of Georgia foreign and holding a Certificate on Full General Education have the right to enroll in the bachelor's educational program in information technologies, based on the results of the Unified National Exams

and for the English exam passing 50% + 1 is the passing threshold.

Admission/enrollment of students to the university without passing Unified National Exams is allowed according to the rules established by the legislation of Georgia (Law of Georgia "On Higher Education", Article 52).

Enrollment in the Bachelor's Educational Program or transfer from a recognized higher educational institution of a foreign country is carried out based on the decision/consent of the Ministry of Education and Science of Georgia.

A prerequisite for a foreign citizen to enroll in the program is submitting a **certificate confirming knowledge of the English language at the B1 level**. Otherwise, the person must take a test at the Language Center of the Caucasus International University to confirm their English language proficiency at the B1 level.

After obtaining the status of a student of the Caucasus International University, a person is obliged to submit to the university a document confirming a complete general or equivalent education, and a person who is subject to military registration in the manner established by law should submit a document certifying military registration.

Enrollment in the Bachelor's Educational Program on the basis of mobility is allowed after the end of the first academic year of study. Mobility is possible twice a year, within the terms set by the Ministry of Education and Science of Georgia, following the mandatory procedures approved by the Act of the Director of the National Center for Educational Quality Enhancement and the rules established by the University.

15. Teaching period and volume

One academic year lasts for **38 weeks**;

The duration of the **I semester** is **19 weeks**;

The duration of the **II semester** is **19 weeks**.

Among which:

- a) The **1-15 weeks** is the study period, lectures-seminars, practical lessons, interim exams, presentations, preparation and defense of essays, and projects are held,
- b) **The 16 - 18 week** is the period of final exams;
- c) During the **19th week** re-examinations are held.

16. The objectives of the educational program

The aim of the bachelor's program is to:

- **To prepare** competitive specialists working in the field of information technologies, who will have theoretical, practical and analytical knowledge relevant to the challenges of the modern world, thus they will be able to successfully operate in the local and international markets.
- **To form** students' critical, logical, and creative thinking, so that they can successfully make optimal decisions based on the analysis of the problems arising in information technologies, communicate

effectively with customers, and participate in the process of selection, creation, evaluation, and administration of information systems and technologies of various profiles;

- **To develop** the skills to provide services, implement various software tools in computer systems, create Web, media, and mobile applications, protect computer networks and information security, create and administer databases, develop and debug software;
- **To develop** the ability of students to fulfill their duties in compliance with ethical principles while working in a team.

17. Learning Outcomes

Consistent and full implementation of the goals of the Bachelor's Program in **Information Technologies** ensures the achievement of relevant learning outcomes (general and field competencies).

<p>Knowledge and awareness</p>	<ol style="list-style-type: none"> 1. Possesses main topics of information technology fields (algorithms, computer programming, applied programs, hardware/techniques and devices, human-computer interfaces, information systems, information management, information technology resource planning, networks, and communication); 2. Describes the technical and software tools needed for the development of various projects; 3. Discusses algorithms and software tools for solving problems relevant to the field; 4. In the process of developing various projects, understands the interests of the customer and the user.
<p>Skill</p>	<ol style="list-style-type: none"> 1. Analyzes the problems arising in the field, considering the studied disciplines. 2. Analyzes and considers user requirements in the process of development and administration of various computer systems. 3. In accordance with the requests, participates in solving and evaluating the problems, as well as in making optimal decisions based on computer technologies. 4. Performs effective communication in the process of project planning and development.
<p>Responsibility and autonomy</p>	<ol style="list-style-type: none"> 1. Realizes professional responsibility and makes justified decisions based on principles of ethics; 2. Performs the duties of a team member and/or leader in the process of project implementation; 3. Determines study needs and plans own development process in the field of information technologies.

18. Structure educational program

Bachelor's Educational Program in "Information Technologies"

240 credits

Compulsory components: 169 credits, among which:

- University compulsory study courses – **19 credits**
- Faculty compulsory study courses – **21 credits**
- Compulsory Field of study study courses - **129 credits**

Elective components: 71 credits, among which

- University elective study courses – **10 credits**,
- Faculty elective study courses – **8 credits**
- Elective Field of study study courses – **33 credits**

Free components: 20 credits.

19. Teaching methodology

The organization of the teaching process aims to use such a methodology, which as a result of the practical implementation in the bachelor's program ensures the achievement of knowledge, skills, and competencies corresponding to the bachelor's academic degree.

Both specific standard methods, as well as non-standard, specific methods, which derive from the peculiarities of the study of the field, are used in the teaching process.

- **Verbal or oral method**, it means the oral transmission of lecture and seminar, or presentation with Power Point;
- **Discussion/debate in a group**, which involves challenging students to argue, to express their opinions during the interactive lecture;
- **method of working on the book**;
- **method of written work**, which involves: test work, solving quizzes, exercises and tasks, preparation of conspectus, theses, essays and abstracts from the main and additional study literature;
- **practical teaching method**;
- **Teamwork**, which provides for the formation of teams of 5-6 people in academic groups, the identification of people with leadership skills in teams, the joint presentation of seminars and educational-creative projects by teams, the development of healthy competition between teams;
- **Case analysis or case-study method**, which describes such specific situations and problems that require judgment. This method acts as an encourager of students' logical thinking;
- **Brainstorming** involves stimulating the realization of students' mental abilities, during which different ideas of students are generated around one issue and their classification according to priority;
- **The demonstration method** uses printed and modern digital technology materials;
- **Explanatory method**;

Action-oriented learning.

The program places special emphasis on the **preparation and presentation of team projects**.

Namely, during the semester, while studying a number of main subjects of the program, student teams prepare and present specific projects for this or that course.

20. Student knowledge assessment system

The university has a 100-point student assessment system.

The final evaluation of the work performed by the student includes the results of the midterm assessments and the final exam. Midterm assessment includes weekly assessments and midterm exam assessments. Each element has its percentage share in the general system of assessment.

Students can get a weekly assessment by actively participating in group works, seminars and practical classes, by writing quizzes, by completing homework, by participating in the solution of a specific situational problem, by completing written tests, by preparing and presenting abstracts, projects, by preparing and presenting individual or group projects, etc.

The midterm exam in each subject is held once a semester.

- Depending on the specifics of a certain study course, it is possible to specify the components included in the midterm assessment element: the content and the share of the components are determined by the leading lecturer of the study course;
- **In the midterm assessments, the student can score a maximum of 60 points;**
- **The minimum competence threshold for midterm assessments is equal to 25 points;**
- **The final exam is mandatory, its share in the assessment system is a maximum of 40 points.**
- **The minimum competence threshold of the final exam is equal to 16 points;**
- **The student is considered to have passed the final exam, if the sum of the midterm assessments and the final exam equals to minimum of 51 points;**

The assessment components and their specific share are outlined in the syllabus of each study course. Information about the assessment system and components is available to students.

Forms and criteria of knowledge assessment:

1. **Work during lectures and working groups** (participation in seminars and practical classes, quizzes, doing homework, participation in solving specific situational problems, written tests, preparation and presentation of independent homework, essays, preparation of individual or group project, presentation, etc.)
2. **Midterm exam;**
3. **Final exam;**
4. **Final assessment.**

The performance in each discipline is evaluated according to the **European Credit Transfer and Accumulation System (ECTS)** and the following evaluation system, approved by the order N3 of January 5, 2007, of the Minister of Education and Science of Georgia on the "**Rules for calculating credits for higher education programs**".

The assessment system allows five types of positive and two types of negative evaluation:

Grades	Assessment	
91-100 points	A	Excellent
81-90 points	B	Very Good
71-80 points	C	Good
61-70 points	D	Satisfactory
51-60 points	E	Sufficient
41-50 points	Fx	Failed to pass (the student needs to work more to pass and is allowed to take an additional exam once with independent work)
0-40 points	F	Failed (The work performed by the student is not enough and he/she

		has to retake the subject).
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The maximum positive grade is 100 points, the minimum positive grade is 51 points.

Note: A student who failed the final exam and earned an FX grade has the right to sit for an additional exam in the same semester, no later than 5 days after the announcement of the results of the main exams.

21. Grade Point Average (GPA)

The level of academic performance of a student at the university is determined both by the points received in the study courses and by the 4-point equivalent of the mentioned points - **the Grade Point Average (GPA)**.

22. Academic degree / qualification to be awarded

Qualifications for graduates of the Bachelor's Educational Program in Information Technologies are granted in accordance with **the "National Qualifications Framework" and "Classifier of Fields of Study" approved by the Order No. 69/N of April 10, 2019, of the Minister of Education, Science, Culture and Sports of Georgia.**

The graduate of the educational program is awarded the **qualification/academic degree of Bachelor of Information Technology** and is given a diploma of the state model confirming the completion of the relevant bachelor program, together with the Diploma Supplement of the model established by the state.

The prerequisite for awarding the qualification/academic degree is the accumulation of 240 ECTS credits by the student.

23. Field of employment

Graduates can be employed in public and private sectors that use information technologies in their activities. Namely: in state management authorities, educational institutions; in information and communication companies, financial institutions, banking and insurance companies; in industrial, telecommunication, communication, and transport companies; in computer and electronics trading and service companies; in law enforcement structures; in organizations and companies where it is required to introduce information technology and ensure their operation.

24. The possibility of continuing the education

A graduate of the Bachelor's Degree Program in Information Technology is entitled to continue his/her studies in the higher educational institutions of Georgia or other countries on a Master's level in the field of information technology studies, which is focused on the training of a specialist and a researcher of a next level. Graduates can also continue their studies in a Master's Degree program in any field, if the prerequisite for admission to this program is not limited to a Bachelor's Degree in another specialty.

Map of competencies

Study Course	Competencies		
	Knowledge and awareness	Skills	Autonomy and Responsibility
Georgian Language – 1 for Foreign students / Foreign Language – 1 (German, French, Russian) for Georgian students	X	X	
Georgian Language – 2 for Foreign students / Foreign Language – 2 (German, French, Russian) for Georgian students	X	X	
Georgian Language – 3 for Foreign students / Foreign Language – 3 (German, French, Russian) for Georgian students	X	X	
Writing Skills	X	X	
Calculus	X	X	
Basics of Management	X	X	
Linear Algebra	X	X	
Statistics	X	X	
Programming basics	X	X	
Algorithms and data structures	X	X	
Computer Architecture	X	X	

Object-oriented programming (C#)	X	X	
Operation Systems	X	X	
Discrete Structures	X	X	
Database Design and Implementation	X	X	
WEB application programming	X	X	X
Graphical fundamentals of web design	X	X	
Database Administration	X	X	
Front-End Development	X	X	X
English For Information Technology -1	X	X	
Web-based media technologies	X	X	
Computer Networks	X	X	
English For Information Technology -2	X	X	
Administration of computer networks	X	X	
Information Security 1	X	X	
Back-End Development	X	X	X
Information Security 2	X	X	
IT Project Management	X	X	X
Hybrid Mobile Application Development	X	X	X

Bachelor's Thesis	X	X	X
Practice in information technologies	X	X	X
Basics of philosophy	X	X	
Basics of psychology	X	X	
American Literature (Colonial Beginnings to the Present)	X	X	
Polish Language - 1	X	X	
Polish Language - 2	X	X	
Innovative Management	X	X	
Electronic business	X	X	
Excel for Business	X	X	
Public Relations	X	X	
Programming in Python language	X	X	
Programming Language JAVA	X	X	
Arduino Programming	X	X	
Basics of artificial intelligence	X	X	
Human-Computer Interactions	X	X	
Organization of computer-communication networks	X	X	

Mobile Application Programming (Android)	X	X	X
Big Data Systems	X	X	
Internet of Things (IoT)	X	X	
Object-oriented programming and applications in Python	X	X	
Publishing Systems	X	X	
Multimedia Packages Adobe Audition, Adobe Premiere	X	X	



