



The University Of Georgia

Program name:	Cybersecurity Engineering (Eng)
Study Level:	Undergraduate
Program leader:	Sulkhan Sulkhanishvili GIORGI PIRVELI
Study language:	English
Qualification:	Bachelor of Cybersecurity
Program capacity:	180
Program permission:	A prerequisite for admission to the program (for citizens of Georgia): Admission of students to the first level of academic higher education (undergraduate programs) is carried out based on the results of the Unified National Examinations or in accordance with Order №224/N (December 29, 2011) of the Minister of Education and Science of Georgia, upon completion of administrative registration and based on the order of the Rector of the university. A prerequisite for admission to the program (for foreign citizens): Foreign applicants who have received full general secondary education abroad or its equivalent, and/or have studied abroad during the last two years of general secondary education, or students who have lived in a foreign country for the past two or more years and are studying in higher education institutions recognized by the legislation of the host country, may be admitted to the program without taking the Unified National Examinations, in accordance with Order №224/N (December 29, 2011) of the Minister of Education and Science of Georgia. A prerequisite for admission to the program is proof of English language proficiency at the B2 level. This can be confirmed by an internationally recognized certificate (TOEFL iBT – minimum score 72, IELTS – minimum score 5.5, PTE General – minimum level B2, FCE – minimum level B2, CPE – a pass is sufficient; CAE – a pass is sufficient). In the absence of such a certificate, English language proficiency may be confirmed by a university-administered exam, where achieving at least 50% of the total score is considered sufficient. In the Unified National Exams, it is mandatory for students to pass Georgian and English, as well as one additional subject in mathematics and/or physics, while for foreign students the university provides a mathematics exam, where the minimum score is 20%.
Program goals:	The Bachelor's Program in Cybersecurity Engineering aims to equip students with comprehensive theoretical knowledge and practical skills across the integrated domains of cybersecurity, software development, and IT systems administration, enabling graduates to independently design, implement, and manage secure information infrastructures. The curriculum provides a solid foundation in information technologies, network architectures, programming, and cybersecurity principles, including data protection, cryptography, and risk management within legal and ethical frameworks. Graduates of the program will be prepared for professional careers in the cybersecurity field as well as for pursuing advanced studies at the graduate level in cybersecurity, computer science, or related disciplines, both in Georgia and internationally.
Methods for Attaining Learning Outcomes:	• Lecture-seminar • Interactive lectures • Explanatory method • Demonstration method • Practical work • Critical analysis • Teamwork / Group work • Problem-oriented exercises • Case study and analysis • Literature review • Working with textbooks • Searching for relevant materials in electronic format or library • Written work method • Verbal (oral) method • Discussions / Debates • Simulation • Role-playing • Induction, deduction, analysis and synthesis • Presentation
Learning outcomes:	Knowledge and understanding • Describes the principles of information technologies, networks, programming, and security within the context of cybersecurity; • Explains vulnerabilities of information systems, cybersecurity threats and attack types, as well as methods for their prevention; • Characterizes the legal and ethical frameworks of data security, cryptography, risk management, and compliance. Skills • Analyzes and assesses the security status of information systems using modern tools; • Develops and implements security measures in software and network infrastructure; • Conducts penetration testing, performs relevant analysis, and prepares recommendations; • Demonstrates effective written and oral communication in a professional environment and prepares relevant technical documentation.

	Responsibility and autonomy • Works independently or in a team on cybersecurity challenges with responsibility and professional ethics; • Assists in improving the security of the organization and the public level.
--	---

Date of approval:	03-14-2025
Approval protocol number:	13PCD6069-01
Date of program update:	
Update protocol number:	

Program details:

Teaching Process Characteristics:	To obtain a Bachelor's degree in Cybersecurity, a student must earn 180 ECTS credits, which include: 138 ECTS from program core subjects (including the bachelor's project of 12 ECTS); 132 ECTS from program elective subjects, from which student selects 42 ECTS.
-----------------------------------	---

Program Core

Code	Subject	ECTS	Semester
CYBR3001E	Introduction to Informatics and Computers	6	1
CYBR3004E	Python in cybersecurity	6	1
INFO2214E	Operating System Linux	6	1
CYBR3003E	Information Security	6	2
INFO2410E	Computer Architecture	6	2
INFO9997E	Introduction to Networks	6	2
MATH3001E	Calculus	6	2
CYBR3007E	Secure Programming	6	3
INFO4259E	Data Structures and Algorithms	6	3
INFO9998E	Network Infrastructure Essentials: Switching, Routing, Wireles	6	3
CYBR3008E	Vulnerability Management and Penetration Testing	6	4
CYBR3009E	Incident Response and Forensics	6	4
MATH3112E	Discrete Mathematics	6	4
MATH4118E	Fundamentals of Cryptology	6	4
CYBR3010E	Logging and Monitoring	6	5
CYBR3011E	Offensive Security: Red Teaming	6	5
CYBR3013E	Cyber Threat Intelligence (CTI)	6	5
CYBR3016E	SIEM and advanced logging	6	5
CYBR3015E	Cloud security	6	6
CYBR3019E	Cybersecurity Operations Center	6	6
MATH2004E	Probability and Statistics	6	6
CYBR3030E	Bachelor's project	12	6

Total ECTS to be taken: 138

Program Elective

Code	Subject	ECTS	
------	---------	------	--

CYBR3006E	Windows Server Management and Administration	6	
CYBR3014E	DevSecOps	6	
CYBR3017E	Data Privacy and Cyber law	6	
CYBR3018E	Programming basics based on Java	6	
CYBR3020E	Information Security Management Systems and ISO/IEC 27001 Standard	6	
EENG1120E	Fundamentals of Electronicss	6	
INFO0101E	Administering Microsoft's cloud solution Azure	6	
INFO0102E	Amazon Cloud Solutions AWS Security Technologies	6	
INFO0103E	Administering Microsoft's cloud solution Azure	6	
INFO0104E	Fundamentals of Programming (C ++)	6	
INFO0105E	Programming language Swift	6	
INFO0106E	Object-oriented programming (C++)	6	
INFO0107E	Visual programming (C#) I	6	
INFO0108E	Introduction to Container Security	6	
INFO0109E	Amazon Cloud Solutions AWS Architecture	6	
INFO0113E	Visual programming (C#) II	6	
INFO0117E	Malware analysis	6	
INFO3011E	Introduction to Blockchain and BlockDAG technologies	6	
INFO3252E	Oracle Database Design and Programming	6	
INFO4444E	Internship	6	
INFO5555E	Arduino and Intro to Hardware Security	6	
INFO9999E	Enterprise Networking, Security, and Automation	6	

Total ECTS to be taken: 42

[Matrix Of Privequisites](#)

Point	GPA	The university assessment	The general assessment in Georgia	
97-100	4,00	A+	A	Excellent
94-96	3,75	A		
91-93	3,50	A-		
87-90	3,25	B+	B	Very good
84-86	3,00	B		
81-83	2,75	B-		
77-80	2,50	C+	C	good
74-76	2,25	C		
71-73	2,00	C-		
67-70	1,75	D+	D	Satisfactory
64-66	1,50	D		
61-63	1,25	D-		
51-60	1,00	E	E	Sufficient
Not passed				
41-50		FX	FX	Insufficient
<40		F	F	Failed