Educational programs

I. Program requisites

Program name	Computer science
Level of higher education	Undergraduate/sixth
Detailed field name and code	Computer Science; 0613.1.2.
Qualification to be awarded	Bachelor of Computer Science
language of instruction	English
Program volume	180 credits
Standard duration of the program	3 years / 6 semesters
Implements the program	Grigol Robakidze University
Gives qualifications	Grigol Robakidze University
Educational unit / school	Business and Management
Academic year	2026-2027

II. Program overview

The Bachelor of Computer Science at GRUNI aims to provide students with a robust and comprehensive education that develops critical thinking, analytical, and problem-solving skills while equipping them with both theoretical knowledge and practical expertise in core computing areas. The program is designed to prepare students to understand, design, and implement modern computing systems, bridging the gap between theory and real-world application.

III. Program objectives

Program objectives:

- Provide strong foundational knowledge in programming, algorithms, data structures, computer architecture and theoretical models of computation.
- Develop practical abilities to design, implement and test software systems using modern development tools.
- Cultivate analytical thinking and algorithmic reasoning to analyze and optimize computational solutions.
- Foster ethical awareness, professional responsibility and understanding of societal impact of computing technologies.
- Prepare graduates for professional careers in the technology sector and further academic study.

IV. Learning outcomes

1. Knowledge and understanding – student:

1.1 Understanding core concepts in programming, data structures, algorithms, and computer architecture.

1.2 Understanding and being able to compare major programming paradigms, including procedural, object-oriented, and functional programming, and apply them appropriately in different contexts.

1.3 Understanding the fundamentals of databases, networks, operating systems, and cybersecurity principles.

2. Skills – student:

2.1 Being able to design and implement software solutions using appropriate data structures and algorithms, following clean code principles and good software engineering practices.

2.2 Being able to develop, test, and debug applications using modern development tools, including version control and unit testing, and document results appropriately.

2.3 Being able to model, query, and manage data using relational databases, including schema design, SQL, normalization, and basic performance considerations.

2.4 Being able to analyze and evaluate correctness, functionality, and efficiency of software solutions, including relevant performance trade-offs in practical contexts.

2.5 Being able to design software systems that meet required correctness, functionality, and performance criteria.
2.6 Being able to apply basic security practices, including input validation, authentication principles, and secure coding, in coursework projects.

3. Responsibility and autonomy – student:
3.1 Being able to apply fundamental ethical, legal, and professional principles in computing, including privacy, security, and intellectual property, and justify responsible decisions in relevant contexts.
3.2 Being able to plan personal learning, identify knowledge gaps, and engage in continuous professional development to remain informed about emerging technologies and practices.
3.3 Being able to work with increasing independence, take responsibility for tasks and decisions, and consider the broader societal impact of computing solutions.

V. Prerequisites for admission/enrollment to the program

For Georgian citizens, the prerequisite for acquiring student status is the outcome of the unified national examinations.
The acknowledgment of student status at the university is contingent upon a ranking document sanctioned by the National Assessment and Examination Center. Based on this document, an agreement is formed with the student, and by no later than October 1, the rector issues a comprehensive legal act regarding the enrollment of applicants/students. This document is forwarded to the Ministry of Education and Science of Georgia within fifteen days.
Following the Minister of Education and Science of Georgia's directive on the results of the unified national exams, the university begins the student registration process within a timeframe specified by the university. Information regarding the commencement of student registration is published on the official website of the university at least ten days prior to the start of registration.
Student registration is executed in accordance with the rector's legal act, adhering to the academic calendar, and is divided into two phases: administrative registration followed by academic registration. Academic registration is facilitated through the "Nexus" Electronic Program for managing the educational process.
The documents required for initial registration to obtain student status include: A) A copy of the Identity Card; B) A copy of the military registration certificate (for males); C) A document certifying completion of General Education - the Certificate; D) Two color photographs (3X4, including an electronic version); E) In cases of minority, a copy of the legal guardian/parent's identity card (registration must be conducted in conjunction with the legal guardian).
English language proficiency at a minimum B1 level is required. Applicants who are citizens of countries where English is an official language, who have completed an English-taught educational program within the last three years with a minimum GPA of 75/100 or 3.0/4.0, or who present an internationally recognized B1-level English language certificate are exempt from internal language testing

VI. Methods of achieving learning outcomes

The following methods are used in the learning and teaching process:

Lecture - mainly have an interactive and presentational nature, which allows for latent monitoring of the quality of understanding of the transmitted information and, accordingly, for changing accents and correcting the pedagogical strategy during the course of the lecture. Taking into account the format of the lectures, as well as the lecture of a specialist in the field.

Work in a group - the student demonstrates in-depth knowledge of the material presented at the lecture, answers the questions, connects the problematic issues raised around the topic, exchanges information, forms different approaches and opinions, is involved in the team's work process and makes logical conclusions.

Practical training - the formation of the ability to transfer knowledge into practice, includes working on cases, situational problems and solving other practical exercises. During situational modeling, students acquire professional skills in an environment as close as possible to reality, which provides an effective means of consolidating theoretical knowledge and forming practical skills.

Teaching with electronic resources - refers to receiving consulting services from the lecturer or other types of communication using the electronic portal (Nexus), including for the purpose of providing, explaining, evaluating learning material/homework for students with special educational needs.

The directive teaching method used within the program involves the student's independent homework in the format of essays, abstracts, projects, exercises, situational tasks, cases, reports and other certain research work without consulting the teacher, which helps to independently find the necessary sources, analyze and develop the skills of writing a research paper.

VII. Knowledge assessment system

The assessment system is divided into two components - midterm and final assessments. Maximum (60 points) and minimum (21 points) limits are defined for midterm assessments. In the final assessment, the maximum limit is 40 points, and the minimum - 21 points.

The sum of the results of the midterm and final assessment gives the final/semester assessment, the minimum positive margin of which is 51 points, and the maximum is 100 points. A student is awarded credit if the minimum final/semester grade is passed.

The assessment system allows:

a) Five types of positive evaluation:

(A) Excellent - 91-100 points

(B) Very good - 81-90 points

(C) Good - 71-80 points

(D) Satisfactory - 61-70 points

(E) Sufficient - 51-60 points

b) Two types of negative evaluation:

(FX) Didn't pass

- 41-50 points, which means that the student needs more work to pass and is given the right to take an additional exam with independent work, which will be scheduled no later than 5 days after the announcement of the final exam results. In case of repeated failure, the course must be repeated.

(F) Failed

- 40 points or less means that the work done by the student is not enough and they have to study the course from scratch.

After passing the midterm or final assessment it is not allowed to retake it to increase the score. In case of missing an exam with a valid excuse, the dean is authorized to issue a retake permit.

Analytical essay - is a scientific paper written by the student within the scope of the topic specified or selected by him/her and agreed with the professor. Demonstrates the skills of understanding the problem, ways of solving it, critical analysis and innovative synthesis of information, use of material and information technologies, formation of reasoned conclusions, independent learning and conducting research, and protection of academic honesty.

Research project (individual and/or team) - is a written research paper, which is completed by the student (individual and/or team) under the guidance of the professor within the framework of the topic agreed with him/her. It presents the student's systematic knowledge around a specific topic of a specific discipline, the methods used for analyzing and synthesizing collected data, including the adequacy of information technologies, problem vision and setting up original ways to solve it, connecting the solutions to the problem with theoretical knowledge, concise conclusions, the ability to work in a team and with an audience. Communication, structured and argumentative representation and presentation skills.

Discussion - provides information about the development and manifestation of the student's ability to seek different approaches to the same idea, the coexistence of different opinions, the importance of seeking a common opinion or group agreement to make a decision, tolerance and respect for other people's opinions. It develops critical thinking, argumentative conclusions, professional skills of understanding and oppressing values in a new way, identifying problems and finding ways to solve them.

Case analysis - demonstrates the skills of perceiving the real picture, applying knowledge in practice, dividing the given information into certain groups, evaluating the features of the problem seen by others, finding different options for solving the problem, fighting the causes of the problem and seeing the ways to solve the problem.

Quiz/Combined Test/Questionnaire - provides information about the knowledge obtained within the framework of a specific topic, the answers reveal a deep and systematic knowledge of the issue.

Situational Task - A situational task is a system of quasi-real factors that creates an imaginary situation and outlines a specific professional task. The task can be set both in written format and verbally. It shows the ability to see the problem, to search for ways to solve the problem, to understand professional values, to formulate specific argumentative positions, to evaluate individual ways of solving problems, to perceive the situational context objectively and to see the problem/complex problem, to determine the way to solve it and to take responsibility for the decision.

Filtering information - is a variety of the project, which contains information collected from different information sources within the framework of the topic specified by the professor. For the preparation of the project, the student is given a partial or no source. He is obliged to find, select/optimize and structure the received information. The paper does not involve a critical analysis of the information, a comment or a presentation of one's own opinion - it should only be a review of the information received from various sources, a general analysis. He demonstrates the skills of written communication with the professional and non-professional community, general analysis and structuring of complete and/or incomplete information, the use of material and digital information tools to find information, to distinguish between primary and secondary information, and to conduct learning independently.

Report - is a structured written work, which involves a systematic review of a book, article and other work of a creative or scientific nature, it demonstrates the skills of structured and logical presentation of a written work, adequately perceiving the issues/problems raised in analytical works, delineating one's attitude, critical analysis and innovative synthesis.

Argumentative essay - presents the author's own position/opinion on the issue and, accordingly, the arguments that will justify the superiority of the presented position/opinion. It shows the quality of understanding the treated issue, understanding the problem and ways to solve it, forming theories related to the topic, own vision/approach, evaluation, serves to develop arguments/counter-arguments and, overall, critical thinking skills.

The assessment components defined in order to assess the achievement of the learning outcomes defined in the educational program component are: mid-term and final assessment.

Mid-term assessment is carried out at the time determined by the study plan. Its purpose is to evaluate the knowledge and skills acquired within the course material.

The final assessment is conducted at the end of the semester, in order to evaluate the acquired knowledge and skills, in the form/method determined by the curriculum.

VIII. Program structure and qualifications

The full program course is designed for four academic years. The academic year includes 38 working weeks and consists of two semesters - autumn (19 weeks) and spring (19 weeks). Of these, 30 weeks cover the learning/teaching process, 2 weeks are devoted to the preparation and passing of the mid-term assessment, and 6 weeks to consultations and the preparation and passing of the final assessment.

The program requires the student to collect at least 180 credits. 1 credit contains 25 hours. Program outcomes are achieved through the learning of individual disciplines - the relevant syllabi determine both the volume of learning material and learning/teaching and assessment methods.

The standard load of a student within the academic year is 60 credits. However, it is allowed to accumulate no more than 75 credits per year.

90 points < Diploma with Honours, 51-90 points – diploma.

The Bachelor's program in Computer Science is structured over six semesters with a clear academic progression. In the early semesters (1-2), the curriculum focuses on foundational knowledge in mathematics, discrete mathematics, statistics, programming fundamentals, and core computing concepts, establishing strong computational and algorithmic thinking.

The middle semesters (3-4) emphasize core Computer Science competencies, including software development, data structures and algorithms, algorithmic complexity analysis, databases, operating systems, and computer networks. In the final semesters (5–6), students study advanced Computer Science topics and complete a capstone project and mandatory professional practice, demonstrating independent problem solving and software development competence.

The curriculum combines a substantial mandatory component (138 ECTS) with an optional component within the major field, where students are required to accumulate at least 42 ECTS from elective courses. This structure allows students to personalize their learning path by selecting electives aligned with their academic interests and career goals in Computer Science and Information Technology, such as software engineering, algorithms and data structures, database systems, computer networks, cybersecurity, cloud computing, Python programming, and artificial intelligence.

In addition to major-field courses, the curriculum includes a free component offering instrumental, cultural-historical, and social science modules. Through these components, students develop transferable skills such as academic writing, digital literacy, teamwork, ethical awareness, and career development skills, supporting holistic academic and professional growth.

Practical orientation is ensured through applied coursework, continuous assessment, a mandatory professional practice (Intership)(12 ECTS), and a capstone project, which enable students to integrate theoretical knowledge with real-world Computer Science challenges. Overall, the curriculum provides a balanced combination of structure and flexibility, supporting clear academic progression, individual development, employability, and readiness for further studies at the Master's level.

Code system of study disciplines:

The code system is structured into two groups. Codes of the first group are intended for academic programs and consist of 6 characters.

The first three are letters, the next three are numbers. The first two letters of the name of the school and the first letter of the word "program" - P are used as letter symbols, while the first digit indicates the educational level, and the following digits indicate the number of the program. i.e. The program code determines which school and educational level a particular program belongs to Eg.: BMP201 – Master's Program of the School of Business and Management.

The second group of codes is aimed at identifying educational disciplines. It generally consists of 7 characters. The first three are alphanumeric characters and contain the first three letters of the program name.

The first of the numerical symbols indicates the educational level, the next two digits are the number of a specific discipline, the last letter symbol indicates the structural group of the discipline: E - optional, C - compulsory. E.g.: BUS201C refers to: the first compulsory discipline in the master's program of business administration.

IX. Program provision

The School employs 48 academic staff and 39 affiliated staff, complemented by invited personnel for specific teaching needs, ensuring sufficient human resources for teaching, research, and student support activities.

X. Employment of graduates and the possibility of continuing their studies

The field of professional activity of the graduates of the program is commercial and non-profit organizations with different organizational and legal forms of any branch of economy and public institutions, where the qualification of a manager is required within the framework of the master's degree in business administration.

University Career Office services are available to all students and graduates. Its service helps prepare students for their careers. Full information is available on the university website www.gruni.edu.ge.

Based on the ,,Law of Georgia On Higher Education", the graduate can continue studies at the next educational level, both with a business management profile and with another specialty.

Graduates are prepared for diverse roles such as software developers, data analysts, IT specialists, cybersecurity analysts, system administrators, and technical consultants. They are also well-positioned for further studies in Computer Science MA, Artificial Intelligence, or related computing fields, enabling strong employability and adaptability in national and international technology sectors.

XI. International integration

The program includes:

Within the framework of international mobility, the opportunity to participate in student competitions, raise qualifications and go on business trips to foreign countries for the purpose of teaching.

1. University of Heidenheim (Germany), https://www.heidenheim.dhbw.de/en/home;
2. University of Porto (Portugal), https://www.up.pt/portal/en/;
3. Jan Kochanowski University (Poland), https://en.ujk.edu.pl/;

XII. Program approval

The program is approved by the order of the rector, No. 01-05/006, dated – 13.02.2026.

Curriculum Matrix

School	**School of Business and Management**
Educational level	**Bachelor**
Program Name	**Computer Science (CS)**
Qualification	**Bachelor of Computer Science**

Head of the Program	**Peter Olveczky**
Program Volume	**180**
Academic year	**2026**

Serial number	Name of the study course	Course code	Prerequisite Course Code	Semester	Number of credits	Lecture	Working in a group	Practical work	Laboratory	Midterm exam	Final Exam	Contact hours	Independent work	Total number of hours	Consultation	Lecturer's Surname, name
*	**Mandatory component of the main field of study - cred 138**															
1	Introduction to Programming I	CSU-C-101		1	7	30		15		2	2	49	126	175	15	Helmut Seidl
2	Computer Architecture	CSU-C-102		1	5	30		15		2	2	49	76	125	15	Salome Pirosmanishvili
3	Linear Algebra	CSU-C-103		1	5	30		15		2	2	49	76	125	15	Anzor Beridze
4	Discrete Mathematics	CSU-C-104		1	5	30		15		2	2	49	76	125	15	Volker Diekert
5	Calculus	CSU-C-105		1	5	30		15		2	2	49	76	125	15	Giorgi Chelidze
6	Foreign Language I	CSU-C-106		1	3	15		15		2	2	34	41	75	15	Tamar Gagoshidze
7	Data Structures & Algorithms	CSU-C-107	CSU-C-101	2	6	30		15		2	2	49	101	150	15	Tamara Mtsentlintze
8	Introduction to Programming II	CSU-C-108	CSU-C-101	2	6	30		15		2	2	49	101	150	15	Helmut Seidl
9	Probability & Statistics	CSU-C-109	CSU-C-105	2	5	30		15		2	2	49	76	125	15	Nino Demetrashvili
10	Foreign Language II	CSU-C-110	CSU-C-106	2	3	15		15		2	2	34	41	75	15	Tamar Gagoshidze
11	Introduction to Databases	CSU-C-111	CSU-C-101	2	5	30		15		2	2	49	76	125	15	Ana Idadze
12	Computer Networks	CSU-C-112	CSU-C-102	2	5	30		15		2	2	49	76	125	15	Vasili Nikolaev

13	Operating Systems	CSU-C-113	CSU-C-107	3	5	30		15		2	2	49	76	125	15	Furio Honsell
14	Introduction to Cybersecurity	CSU-C-114	CSU-C-112	3	5	30		15		2	2	49	76	125	15	Sedat Akleylek
15	Theoretical Foundations of Computer Science	CSU-C-115	CSU-C-104	3	6	30		15		2	2	49	101	150	15	Besik Dundua
16	Artificial Intelligence: Concepts and Applications	CSU-C-116	CSU-C-105	3	6	30		15		2	2	49	101	150	15	Mariam Dedabrishvili
17	Software Engineering	CSU-C-117	CSU-C-108; CSU-C-101	3	5	30		15		2	2	49	76	125	15	Demetre Labadze
18	Foreign Language III	CSU-C-118	CSU-C-110	3	3	15		15		2	2	34	41	75	15	Tamar Gagoshidze
19	Logic in AI and CS	CSU-C-119	CSU-C-104	4	6	30		15		2	2	49	101	150	15	Temur Kutsia
20	Foundations of Distributed Systems	CSU-C-120	CSU-C-113	4	6	30		15		2	2	49	101	150	15	Sergei Gorlatch
21	Algorithm Complexity	CSU-C-121	CSU-C-101	4	6	30		15		2	2	49	101	150	15	Peter Ölveczky
22	Internship	CSU-C-122		5	12			15			2	17	125	142	15	
23	Formal Modeling and Analysis	CSU-C-123	CSU-C-104	5	6	30		15		2	2	49	125	174	15	Peter Ölveczky
24	Functional and Logic Programming	CSU-C-124	CSU-C-104	6	6	30		15		2	2	49	101	150	15	Tudor Jebelean
25	Distributed Databases and Cloud Systems	CSU-C-125	CSU-C-111	6	6	30		15		2	2	49	101	150	15	Ana Idadze
Elective component of the main field of study - at least 85 credits																
1	DevOps	CSU-C-126	CSU-C-113	4	6	30		15		2	2	49	101	150	15	Grigol Mikadze
2	Software Testing & Quality Assurance	CSU-E-127	CSU-C-117	4	6	30		15		2	2	49	101	150	15	Anriette Michel Fouad Bishara
3	Web Technologies	CSU-C-128	CSU-C-101	4	6	30		15		2	2	49	101	150	15	Anriette Michel Fouad Bishara
4	Natural Language Processing	CSU-C-129	CSU-C-116	4	6	30		15		2	2	49	101	150	15	Nino Amiridze
5	Secure Software Development	CSU-E-130	CSU-C-117	4	6	30		15		2	2	49	101	150	15	Vasili Nikolaev
6	Machine Learning	CSU-C-131	CSU-C-109	4	6	30		15		2	2	49	101	150	15	Nino Demetrashvili
7	Principles of Economics	CSU-E-132		4	6	30		15		2	2	49	101	150	15	Vakhtang Charaia
8	Information Security Risk Management	CSU-C-133	CSU-C-114	4	6	30		15		2	2	49	101	150	15	Grigol Mikadze

9	Automation Testing Course	CSU-E-134	CSU-C-108	4	6	30		15		2	2	49	101	150	15	Anriette Michel Fouad Bishara
10	Time Series Forecasting	CSU-E-135	CSU-C-109	4	6	30		15		2	2	49	101	150	15	Nino Demetrashvili
11	IT Infrastructure & Services Management	CSU-E-136	CSU-C-112	4	6	30		15		2	2	49	101	150	15	Hakan Ergun
12	Information Security Management	CSU-E-137	CSU-C-114	4	6	30		15		2	2	49	101	150	15	Hakan Ergun
13	IT Governance, Ethics & Law	CSU-E-138		4	6	30		15		2	2	49	101	150	15	Nino Amiridze
14	AI Applications in IT	CSU-E-139	CSU-C-116	4	6	30		15		2	2	49	101	150	15	Mariam Dedabrishvili
15	Enterprise Information Systems	CSU-C-140	CSU-C-111	4	6	30		15		2	2	49	101	150	15	Tamta Lekishvili
16	IT Project Management	CSU-C-141	CSU-C-117	4	6	30		15		2	2	49	101	150	15	Demetre Labadze
17	Introduction to IT Systems	CSU-E-142	CSU-C-102	4	6	30		15		2	2	49	101	150	15	Lia Kurtanidze
18	Web and Application Security	CSU-E-143	CSU-C-114	5	6	30		15		2	2	49	101	150	15	Vasili Nikolaev
19	Network Administration & Monitoring Tools	CSU-E-144	CSU-C-112	5	6	30		15		2	2	49	101	150	15	Hakan Ergun
20	Introduction to Digital Systems	CSU-E-145	CSU-C-102	5	6	30		15		2	2	49	101	150	15	Salome Pirosmanishvili
21	Business English	CSU-E-146		5	6	30		15		2	2	49	101	150	15	Lamara Kadagidze
22	Deep Learning	CSU-C-147	CSU-C-116	5	6	30		15		2	2	49	101	150	15	Salome Pirosmanishvili
23	Human-Computer Interaction (HCI)	CSU-E-148	CSU-C-117	5	6	30		15		2	2	49	101	150	15	Salome Pirosmanishvili
24	Cryptography	CSU-E-149	CSU-C-104	5	6	30		15		2	2	49	101	150	15	Sedat Akleylek
25	Network Security	CSU-C-150	CSU-C-114	5	6	30		15		2	2	49	101	150	15	Sedat Akleylek
26	Automated Theorem Proving	CSU-E-151	CSU-C-115	5	6	30		15		2	2	49	101	150	15	Tudor Jebelean
27	Compiler Design	CSU-E-152	CSU-C-115	5	6	30		15		2	2	49	101	150	15	Besik Dundua
28	Academic Writing & Communication Skills	CSU-E-153		5	6	30		15		2	2	49	101	150	15	Tudor Jebelean
29	Explainable AI	CSU-E-154	CSU-C-116	5	6	30		15		2	2	49	101	150	15	Lia Kurtanidze
30	Probabilistic Graphical Models	CSU-E-155	CSU-C-109	5	6	30		15		2	2	49	101	150	15	Giorgi Chelidze
31	AI for Sustainability	CSU-E-156	CSU-C-116	5	6	30		15		2	2	49	101	150	15	Mariam Dedabrishvili

32	AI in Smart Cities	CSU-E-157	CSU-C-116	5	6	30		15		2	2	49	101	150	15	Mariam Dedabrishvili
33	Causal Inference	CSU-E-158	CSU-C-109	5	6	30		15		2	2	49	101	150	15	Mariam Dedabrishvili
34	AI Startups & Innovation	CSU-E-159	CSU-C-141	5	6	30		15		2	2	49	101	150	15	Tamta Lekishvili
35	Symbolic Computation	CSU-E-160	CSU-C-104	5	6	30		15		2	2	49	101	150	15	Anzor Beridze, Mircea Marin
36	Cloud Security	CSU-E-161	CSU-C-114	5	6	30		15		2	2	49	101	150	15	Grigol Mikadze
37	AI for Cybersecurity	CSU-E-162	CSU-C-114	5	6	30		15		2	2	49	101	150	15	Grigol Mikadze
38	Business Intelligence Systems	CSU-E-163	CSU-C-111	5	6	30		15		2	2	49	101	150	15	Tamta Lekishvili
39	Digital Transformation in Organizations	CSU-E-164	CSU-C-140	5	6	30		15		2	2	49	101	150	15	Tamta Lekishvili
40	IoT & Embedded Systems	CSU-E-165	CSU-C-102	6	6	30		15		2	2	49	101	150	15	Salome Oniani
41	Models of Computation	CSU-E-166	CSU-C-115	6	6	30		15		2	2	49	101	150	15	Matthias Baaz
42	Data Mining	CSU-E-167	CSU-C-111	6	6	30		15		2	2	49	101	150	15	Demetre Labadze
43	Non-Classical Logic	CSU-E-168	CSU-C-119	6	6	30		15		2	2	49	101	150	15	Matthias Baaz
44	Privacy & Data Protection	CSU-E-169	CSU-C-114	6	6	30		15		2	2	49	101	150	15	Grigol Mikadze
45	Programming with Python	CSU-E-170	CSU-C-108	6	6	30		15		2	2	49	101	150	15	Levan Uridia
46	Web Development	CSU-E-171	CSU-C-128	6	6	30		15		2	2	49	101	150	15	Vasili Nikolaev
47	Data Analysis with Python	CSU-C-172	CSU-C-108	6	6	30		15		2	2	49	101	150	15	Levan Uridia
48	Critical Thinking	CSU-E-173		6	4	30		15		2	2	49	101	150	15	Furio Honsell
49	Parallel & Distributed Systems	CSU-E-174	CSU-C-113	6	6	30		15		2	2	49	101	150	15	Sergei Gorlatch
50	Neuro-symbolic AI	CSU-E-175	CSU-C-119	6	6	30		15		2	2	49	101	150	15	Besik Dundua
51	Generative AI	CSU-E-176	CSU-C-147	6	6	30		15		2	2	49	101	150	15	Lia Kurtanidze
52	Computer Vision	CSU-E-177	CSU-C-103	6	6	30		15		2	2	49	101	150	15	Mariam Dedabrishvili
53	IT Support & Helpdesk Systems	CSU-E-178	CSU-E-142	6	6	30		15		2	2	49	101	150	15	Hakan Ergun
54	Ethics, Society, and Law in AI	CSU-C-179	CSU-C-116	6	6	30		15		2	2	49	101	150	15	Nino Amiridze
55	Systems Thinking & Design Thinking	CSU-E-180		6	6	30		15		2	2	49	101	150	15	furio Honsell
56	Cloud Computing	CSU-E-181	CSU-C-113	6	6	30		15		2	2	49	101	150	15	Grigol Mikadze
57	IT in Healthcare	CSU-E-182	CSU-E-142	6	6	30		15		2	2	49	101	150	15	Nino Demetrashvili
58	Ethical Hacking & Network Defense	CSU-E-183	CSU-C-114	6	6	30		15		2	2	49	101	150	15	Demetre Labadze

59	Technology Entrepreneurship	CSU-E-184		6	6	30		15		2	2	49	101	150	15	Tamta Lekishvili