



**NATIONAL CENTER FOR
EDUCATIONAL QUALITY
ENHANCEMENT**

Accreditation Expert Group Report on Higher Education Programme

Joint Bachelor's Programme in Computer Science

Caucasus University

Evaluation Date: February 22, 2023

Report Draft Submission Date April 24, 2023

Tbilisi

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Information about a Higher Education Institution ¹

Name of Institution Indicating its Organizational Legal Form	Caucasus University LLC Fairleigh Dickinson University (USA)
Identification Code of Institution	205050567 184603
Type of the Institution	University

Expert Panel Members

Chair (Name, Surname, HEI/Organisation, Country)	Geoffrey Dick, St John's University, NY, USA
Member (Name, Surname, HEI/Organisation, Country)	Mikheil Rukhaia, LEPL Tbilisi State University, Georgia
Member (Name, Surname, HEI/Organisation, Country)	George Giorgobiani, LEPL Muskhelishvili Institute of Computational Mathematics of the Georgian Technical University
Member (Name, Surname, HEI/Organisation, Country)	Sophio Ugrekhelidze, LEPL Educational Management Information System, Georgia
Member (Name, Surname, HEI/Organisation, Country)	George Popkhadze LEPL Georgian Technical University

¹ In the case of joint education programme: Please indicate the HEIs that carry out the programme. The indication of an identification code and type of institution is not obligatory if a HEI is recognised in accordance with the legislation of a foreign country.

I. Information on the education programme

Name of Higher Education Programme (in Georgian)	კომპიუტერული მეცნიერების ერთობლივი საბაკალავრო პროგრამა
Name of Higher Education Programme (in English)	Joint Bachelor Program in Computer Science
Level of Higher Education	Bachelor
Qualification to be Awarded ²	Caucasus University LLC – მეცნიერების ბაკალავრი კომპიუტერულ მეცნიერებაში / Bachelor of Science in Computer Science Fairleigh Dickinson University – მეცნიერების ბაკალავრი / Bachelor of Science
Name and Code of the Detailed Field	0613 - Software and Applications Development and Analysis
Indication of the right to provide the teaching of subject/subjects/group of subjects of the relevant cycle of the general education ³	
Language of Instruction	English
Number of ECTS credits	200
Programme Status (Accredited/ Non-accredited/ Conditionally accredited/new/International accreditation) Indicating Relevant Decision (number, date)	New
Additional requirements for the programme admission (in the case of an art-creative and/or sports educational programme, passing a creative tour/internal competition, or in the case of another programme, specific requirements for admission to the programme/implementation of the programme)	

² In case of implementing a joint higher education programme with a higher education institution recognized in accordance with the legislation of a foreign country, if the title of the qualification to be awarded differs, it shall be indicated separately for each institution.

³ In case of Integrated Bachelor's-Master's Teacher Training Educational Programme and Teacher Training Educational Programme

II. Accreditation Report Executive Summary

General Information on Education Programme⁴

The programme is a three-year undergraduate Computer Science programme. It is a joint Bachelor's Program between Caucasus University and Fairleigh Dickinson University. It enables CU students to start a three-year Bachelor's joint degree program at CU for 2 years (150 credits) and receive a joint Bachelor's degree in Computer Science through a transfer of credits and the completion of 1 year, in-person, at Fairleigh Dickinson. (50 credits).

Overview of the Accreditation Site Visit

The site visit was on-campus (and on-line via Zoom for the Team Chair) on Wednesday February 22, 2023. The panel met University representatives, programme directors, academics, officials, students and external stakeholders from both universities. A physical tour of the facilities at the Caucasus University was also provided to the local members of the evaluation team.

Brief Overview of Education Programme Compliance with the Standards

The programme meets all the Georgian standards against which it was evaluated at the level of substantial compliance or above (in only two instances was a sub-criterion assessed as substantial compliance – all others were full compliance)

1. Educational Programme Objectives, Learning Outcomes and their Compliance with the Programme – Complies with requirements
 - 1.1. Complies with requirements
 - 1.2. Complies with requirements
 - 1.3. Complies with requirements
 - 1.4. Complies with requirements
 - 1.5. Complies with requirements
2. Methodology and Organisation of Teaching, Adequacy of Evaluation of Programme Mastering- Complies with requirements
 - 2.1. Complies with requirements
 - 2.2. Substantially complies with requirements
 - 2.3. Complies with requirements
 - 2.4. Complies with requirements
3. Student Achievements, Individual Work with Them – Substantially complies with requirements
 - 3.1. complies with requirements
 - 3.2. N/A
4. Providing Teaching Resources - Complies with requirements

⁴ When providing general information related to the programme, it is appropriate to also present the quantitative data analysis of the educational programme.

- 4.1. Complies with requirements
- 4.2. N/A
- 4.3. Complies with requirements
- 4.4. Complies with requirements
- 4.5. Complies with requirements
- 5. Teaching Quality Enhancement Opportunities - Complies with requirements
 - 5.1. Complies with requirements
 - 5.2. Complies with requirements
 - 5.3. Complies with requirements

Recommendations

- It is recommended that the learning weeks must be adjusted for the syllabi Calculus 1, 2, Physics 1, 2, Linear Algebra. The learning process is distributed in 20 weeks, while most of the syllabi comprise 14 weeks.

Suggestions for Programme Development

- It is suggested that the programme administration undertake a review of the proposed teaching practices surrounding the course material with a view to incorporating more research based teaching and learning into the curriculum.
- It is suggested that as the program matures, a system of continuous review of the programme objectives be implemented in order to ensure that, a) they continue to be relevant and b) they are being achieved.
- It is suggested that the course syllabus “Probability and Statistics” problem solving incorporate some relevant statistical software like Excell, MegaStat or MINITAB.
- it is suggested to have more close collaboration between CU and FDU staff by visiting each other’s universities and exchanging experience.
- It is suggested to correct technical issues in syllabi

Brief Overview of the Best Practices (if applicable)⁵

Information on Sharing or Not Sharing the Argumentative Position of the HEI:

Expert Panel received the argumentative position letter regarding draft report and provided explanation regarding recommendation. According to the letter University does not agree with the Panel position. After further discussion members of the expert panel decided to not to change their opinion and leave the recommendation and suggestions.

In case of re-accreditation, it is important to provide a brief overview of the achievements and/or the progress (if applicable)

⁵ A practice that is exceptionally effective and that can serve as a benchmark or example for other educational programme/programmes.

III. Compliance of the Programme with Accreditation Standards

1. Educational Programme Objectives, Learning Outcomes and their Compliance with the Programme

A programme has clearly established objectives and learning outcomes, which are logically connected to each other. Programme objectives are consistent with the mission, objectives and strategic plan of the HEI. Programme learning outcomes are assessed on a regular basis to improve the programme. The content and consistent structure of the programme ensure the achievement of the set goals and expected learning outcomes.

1.1 Programme Objectives

Programme objectives consider the specificity of the field of study, level and educational programme, and define the set of knowledge, skills and competences a programme aims to develop in graduate students. They also illustrate the contribution of the programme to the development of the field and society.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

The program has clearly defined programme objectives:

- 1: To provide the student with a relatively deep knowledge of theoretical aspects of higher-level learning disciplines than the complete general education, which prepares the person for further study at the Master's degree program or work with a received qualification.
- 2: To give the student education in Computer Science, based on fundamental theories and principles of mathematics and Computer Science, which will enable him / her to develop professionally and contribute to the development of the field.
- 3: To prepare high-level, competitive specialists with the broad theoretical knowledge and practice-oriented, transferable skills necessary for professional activities in modern CS field in Georgia and abroad as well.

These incorporate study at both of the institutions. They are based on a Memorandum of Understanding to provide for instructors from both institutions. The objectives are focused on an important and current need not only for Georgia but for computer Science education world-wide.

The objectives are related and mapped to the learning outcomes and can be traced to the individual courses taken by the students. They are realistic and achievable and aimed at providing graduates with employable and sort-after skills and abilities. They are largely consistent with the mission statement of the university. Both Universities are committed to the improvement of the educational, intellectual, cultural, socioeconomic, and physical environment and preparing the competitive, highly-qualified, morally-grounded professionals. The programme takes into account the local needs of potential employers and addresses societal needs. It appears that the program enjoys the strong support of senior management and faculty in both institutions.

It is noted that the Caucasus university mission statement includes "The mission of Caucasus University is to prepare [students] for local and international markets, through research-oriented teaching and learning" Although some courses include some minor research work in assignment completion etc., it is not evident that this is planned at a level that would be commensurate with what is envisaged in the mission statement.

It should also be noted that the program is in its infancy and in future years there may be a need to re-evaluate the program objectives to determine whether they are being achieved. It is too early for this assessment to be undertaken at this point in the life of the program.

Evidences/Indicators

- Mapping to individual course syllabi via the learning outcomes as provided in documents provided with the self study
- Comprehensive coverage in self-study report and
- Strong commitment to the program from both institutions as demonstrated in the site visit and in discussions with program management

Recommendations:

Suggestions for the Programme Development

- It is suggested that the programme administration undertake a review of the proposed teaching practices surrounding the course material with a view to incorporating more research based teaching and learning into the curriculum..
- It is suggested that as the program matures, a system of continuous review of the programme objectives be implemented in order to ensure that, a) they continue to be relevant and b) they are being achieved.

Non-binding suggestions for programme development

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
1.1 Programme Objectives	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1.2 Programme Learning Outcomes

➤ The learning outcomes of the programme are logically related to the programme objectives and the specifics of the study field.

➤ Programme learning outcomes describe knowledge, skills, and/or the responsibility and autonomy that students gain upon completion of the programme.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

The programme has developed Learning Outcomes, 11 in all, of which 7 are common with two additional Learning Outcomes for each of the concentrations: Big Data Analytics and Game and Mobile Application Development. These are based on the Objectives of the programme and have been mapped to the individual course syllabi. They cross elements of the programme to be delivered by both institutions and are clear and appropriate for the programme and represent what the panel

sees as an appropriate skill set. The programme administration and faculty are aware of the need for continuous improvement and have begun to develop procedures for its assessment.

Evidences/Indicators

- The self-evaluation report and supporting documentation
- Course syllabi
- Interviews and discussion with faculty and programme management

Recommendations:

Suggestions for Programme Development

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
1.2 Programme Learning Outcomes	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1.3 Evaluation Mechanism of the Programme Learning Outcomes

- ☐ Evaluation mechanisms of the programme learning outcomes are defined; the programme learning outcomes evaluation cycle consists of defining, collecting and analyzing data necessary to measure learning outcomes;
- ☐ Programme learning outcomes assessment results are utilized for the improvement of the programme.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

The programme has prepared a comprehensive document “Mechanism of Learning Outcomes Evaluation” which maps the Program Objectives to the Learning Outcomes, maps the Learning Outcomes to individual courses, identifies courses in which the assessment of achievement will take place, and provides a series of indicators by which that achievement will be assessed. It also provides a schedule outlining when the assessment is to be conducted.

Evidences/Indicators

- Mechanism of Learning Outcomes Evaluation
- Discussions with faculty

Recommendations:

Suggestions for the Programme Development

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
1.3 Evaluation Mechanism of the Programme Learning Outcomes	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1.4. Structure and Content of Education Programme

- ☐ The Programme is designed according to HEI's methodology for planning, designing and developing of education programmes.
- ☐ The Programme structure is consistent and logical. The content and structure of the programme ensure the achievement of programme learning outcomes. The qualification to be granted is consistent with the content and learning outcomes of the programme.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

The bachelor programme is based on the provisions of the HEI, which define the rules for planning, designing and development of programs, which is confirmed by the protocols of working group meetings and interviews with academic and administrative staff. The programme language is English and is a 3-year joint program with FDU. The programme consists of 200 ECTS (120 US) credits:

Learning courses of a narrow sphere (159 ECTS credits)

- ☐ Mandatory learning courses - 119 ECTS credits;
- ☐ Optional learning courses - 15 ECTS
- ☐ Concentration - 25 ECTS

Learning courses of free component (41 ECTS credits)

- ☐ University Mandatory learning courses - 30 ECTS credits;
- ☐ University Optional learning course - 5 ECTS credits;
- ☐ Free courses - 6 ECTS credits;

The courses indicated in the programme have prerequisites and are adequate. All stakeholders were involved in the designing the programme.

The programme mainly focuses on the modern development of the field and is designed to largely provide both the theoretical knowledge required for Computer Science and the development of practical skills. Full information about the programme is available on the University website.

Evidences/Indicators

- Joint Bachelors Programme in Computer Science description
- Self-evaluation report
- University web-page

Recommendations:

Suggestions for the programme development

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
1.4 Structure and Content of Educational Programme	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1.5. Academic Course/Subject

- The content of the academic course / subject and the number of credits ensure the achievement of the learning outcomes defined by this course / subject.
- The content and the learning outcomes of the academic course/subject of the main field of study ensure the achievement of the learning outcomes of the programme.
- The study materials indicated in the syllabus ensure the achievement of the learning outcomes of the programme.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

The learning outcomes of the main specialty courses of the undergraduate education program Computer Science correspond to the learning outcomes of the program. The content of the courses in the program correspond to the level of the bachelor's degree. The learning outcomes of each course correspond to the content of the given course. The number of credits allocated for the courses, the hours of contact and independent work, correspond to the content of the course and the learning outcomes. The ratio between contact and independent hours corresponds to the specifics of each course. The learning methods (lecture, practical, laboratory, etc.) in each course are selected in such a way to correspond to the content of the course and the learning outcomes. The learning outcomes can be assessed in courses.

The content of the courses develops from the introductory part to more complex topics. The program is built sequentially - from basic to special courses. Each course is preceded by a prerequisite or component that requires knowledge to master this course.

The educational courses of the educational bachelor's program Computer Science are provided with modern literature: textbooks, methodological instructions, etc. The compulsory literature and other study materials indicated in the courses correspond to the learning outcomes of the course; the mandatory literature cited in the syllabi provides a good addition in the field achievements and research. It should be noted here, that in some of the syllabi the literature is not cited properly (sometimes authors or publisher or year or all together is missing).

Evidences/Indicators

- Joint Vachelors Programme in Computer Science description
- Self-evaluation report
- Course Syllabi

Recommendations:

Suggestions for the programme development

- It is suggested to correct technical issues is syllabis

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
1.5. Academic Course/Subject	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Compliance of the Programme with the Standard

1. Educational programme objectives, learning outcomes and their compliance with the programme	Complies with requirements	X
	Substantially complies with requirements	<input type="checkbox"/>
	Partially complies with requirements	<input type="checkbox"/>
	Does not comply with requirements	<input type="checkbox"/>

2. Methodology and Organisation of Teaching, Adequacy of Evaluation of Programme Mastering

Prerequisites for admission to the programme, teaching-learning methods and student assessment consider the specificity of the study field, level requirements, student needs, and ensure the achievement of the objectives and expected learning outcomes of the programme.

2.1 Programme Admission Preconditions

The HEI has relevant, transparent, fair, public and accessible programme admission preconditions and procedures that ensure the engagement of individuals with relevant knowledge and skills in the programme to achieve learning outcomes.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

Programme Admission Preconditions comprise general as well as the additional requirements. Any person having a secondary education is entitled to enroll in the Undergraduate Program in Computer Science. The precondition for admission to the program is to pass the Unified National Examination. Other mandatory requirement for program enrollment is passing the English Language as a foreign language in the Unified National Examinations. Eligibility criteria for the program without having passed the Unified National Examinations are the conditions about English language B2 level proficiency and passing an exam in Mathematics administered by the Caucasus University. These requirements are in accordance with Accreditation Standards and other relevant legislative acts of Georgia.

Mobility to the program is allowed in accordance with procedures set by the relevant law.

Regarding the dissemination of the programs operating at the university for the applicants, CU holds meetings throughout the country providing information about the school's undergraduate programs (information brochures are also distributed). Relevant information is available on the website.

Any exceptions to the Law on Enrolment at Higher Education Institutions are allowed only in the cases prescribed by Law.

As a conclusion, prerequisites and procedures for admission to the program are in accordance with the applicable legislation, is fair, public and accessible. Relevant information on admission preconditions for other, already functioning programs is placed on the website of the university.

University has the student contingency planning mechanism, methodology and target benchmarks, where the criteria for determining students' annual number for admission is given. Conformably, CU plans to open admission for 50 students.

Evidences/Indicators

- self-evaluation report (SER)
- enclosed documents
- The undergraduate Program
- The Caucasus University website
- Interview at CU

Recommendations:

Suggestions for the programme development

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
2.1 Programme Admission Preconditions	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2.2. The Development of Practical, Scientific/Research/Creative/Performing and Transferable Skills

Programme ensures the development of students' practical, scientific/research/creative/performing and transferable skills and/or their involvement in research projects, in accordance with the programme learning outcomes.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

Professional practice is a necessary component of any program. One of the objectives of the Program under review is to prepare high-level, competitive specialists with the broad theoretical knowledge as well as the practice-oriented, transferable skills.

Learning Outcomes comprise the ability of a graduate to explain practical aspects of the field, application of the latest approaches and technological tools in practice. Teaching and Learning Methods include deductive and Action-oriented teaching methods, which emphasize the practical interpretation of theoretical knowledge and concepts.

The scientific-technical and entrepreneurship development centers of innovative technologies at the university ensure material-technical and intellectual assistance for the practical tasks.

Caucasus School of Technology adheres the principle of the inseparability of academic teaching, research and practice. In this respect, the student has an opportunity to work on various individual and team projects. The compulsory and optional courses and the mandatory nature of the Computer Science Senior Project of the program are aimed at developing of practical and research skills. There are special courses such as "Academic Writing," "Technical Communication," and "Computer Science Coursework" supporting development of transferable skills.

The program aims at qualification level 6 of the National Qualifications Framework, which implies the usage of cognitive and practical skills for solving the difficult and unforeseen problems, implementation of the project of practical nature due to the predetermined instructions, data

collection and definition, social, scientific and ethical issues, communication etc. These aspects are well defined by the program. Computer Science Senior Project (syllabus CSCI 4386) in the last semester, under the supervision of the Partner University, will summarize the whole study process. One comment about the teaching method of the course “Probability and Statistics” (Course Code: STAT 2140, ECTS – 5, III semester). The goal of the course is to familiarize students with methods of collection, presentation and interpretation of quantitative and qualitative data; mathematical models of random phenomena, description of their behavior and main characteristics; basics of statistical inference; simple regression models. One of the Learning Outcomes is the ability of a student to use the data for practical purposes, perform statistical inference. To achieve these goals, having in mind that student must acquire the practical skills for dealing with large data that prevails in statistical problems, but also must be able to at least know the graphical techniques to visualize the data, we suggest to incorporate in the course syllabus problem solving with some relevant statistical software. In this respect, the compulsory reading for the course "Business statistics in Practice" (7th Edition)" suggests Excell, MINITAB to work with real data. Probability and Statistics is a prerequisite for the elective course of “Machine Learning”, where advanced programming language, such as Python is more appropriate. Thus for the course Probability and Statistics as a practical, problem solving software could be considered Python as well. But in this case a student must be familiar with Python at this stage, in other words, Python should be a prerequisite for the course.

In some syllabi like Calculus 1, 2, Physics 1, 2, Linear Algebra the learning process is distributed in 20 weeks, while most of the syllabi comprise 14 weeks. This must be corrected (CU provided updates but these cited syllabuses are not present).

A strong support to the program are 32 memorandums of cooperation between the CU and partner organizations, such as various companies, banks and government organizations and agencies. The memorandums focus on delivering opportunities to young specialists for acquiring practical skills and knowledge, high standards for the job market etc.

As a conclusion, the program is designed well with respect to developing the Practical, Scientific/Research/Creative/ Performing and Transferable Skills. University has auditoria designed for lectures and practical classes equipped with appropriate equipment and devices.

Evidences/Indicators

- Syllabi of learning courses defined by the program
- self-evaluation report (SER)
- enclosed documents
- The undergraduate Program
- The Caucasus University website
- Interview at CU

Recommendations:

- In the syllabi Calculus 1, 2, Physics 1, 2, Linear Algebra the learning process is distributed in 20 weeks, while most of the syllabi comprise 14 weeks. The learning weeks must be adjusted.

Suggestions for the programme development

- we suggest to incorporate in the course syllabus “Probability and Statistics” problem solving with some relevant statistical software like Excell, MegaStat or MINITAB.

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
2.2.The Development of practical, scientific/research/creative/performing and transferable skills	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>

2.3. Teaching and Learning Methods

The programme is implemented by use student-oriented teaching and learning methods. Teaching and learning methods correspond to the level of education, course/subject content, learning outcomes, and ensure their achievement.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

In accordance with a specific educational and research task, the following teaching methods are used: verbal/oral, book work, written work, demonstration, practical case analysis (Case study), problem-based learning (PBL), inductive, deductive, analysis, synthesis, group work, collaborative, heuristic, brainstorming, action-oriented, historical, comparative, and others.

Various teaching-learning methods are combined in the specific study courses and are outlined in the course syllabus. These combinations of the methods are in accordance with the aims, activities and the interests of the students. From the technical point of view, they are achievable and will be effective due to the human and material resources.

In accordance to the Accreditation Standards, electronic/distance learning possibilities, such as electronic databases for the students to monitor their academic performance, electronic systems for evaluating students' knowledge and organizing the teaching process and for the academic staff as well are available in the Caucasus University. This will support the implementation of the program.

Caucasus University has well established services to support foreign students and the students with special educational needs.

As a conclusion, teaching and learning methods correspond to the level of education, course/subject content, learning outcomes, and ensure their achievement.

Evidences/Indicators

- Syllabi of learning courses defined by the program
- self-evaluation report (SER)
- enclosed documents
- The undergraduate Program;
- Interview at CU

Recommendations:

Suggestions for the programme development

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
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2.3. Teaching and learning methods	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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2.4. Student Evaluation

Student evaluation is conducted in accordance with the established procedures. It is transparent, reliable and complies with existing legislation.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

Due to the program under review, the student's evaluation is based on four major principles, objectivity, trustworthiness, validity and transparency and two sets of evaluation, summative and formative. Evaluation criteria is specified in details and is accessible for the student. The components and methods of evaluation

take into account the specifics of the learning course, corresponds to the learning outcomes of this course and is defined by the relevant syllabus.

Aside from the Midterm Exam, interim assessment includes various components like Homework assignments, Written work, Presentation, Project, where the assessment procedures are clearly stated. Assessment Appeals Mechanism is also available.

As a conclusion, student evaluation is conducted in accordance with the established procedures, is transparent, reliable and complies with existing legislation.

Evidences/Indicators

- Syllabi of learning courses defined by the program
- self-evaluation report (SER)
- enclosed documents
- The undergraduate Program
- Interview at CU

Recommendations:

Suggestions for the programme development

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
2.4. Student evaluation	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Compliance with the programme standards

2. Methodology and Organisation of Teaching, Adequacy of Evaluation of Programme Mastering	Complies with requirements	X
	Substantially complies with requirements	<input type="checkbox"/>
	Partly complies with requirements	<input type="checkbox"/>
	Does not comply with requirements	<input type="checkbox"/>

3. Student Achievements, Individual Work with Them

The programme ensures the creation of a student-centered environment by providing students with relevant services; promotes maximum student awareness, implements a variety of activities and facilitates student involvement in local and/or international projects; proper quality of scientific guidance is provided for master's and doctoral students.

3.1 Student Consulting and Support Services

Students receive consultation and support regarding the planning of learning process, improvement of academic achievement, and career development from the people involved in the programme and/or structural units of the HEI. A student has an opportunity to have a diverse learning process and receive relevant information and recommendations from those involved in the programme.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

Based on the interview with the graduates and students of the related program of computer sciences, we can conclude that they are very satisfied with the university and professors.

Joint Bachelor's Program in Computer Science is new and I believe it meets all the standards.

It should also be noted that the career development and employment promotion service operating in the university closely cooperates with employing organizations and provides students with information about various types of vacancies.

Evidences/Indicators

- Interviews with students and graduates from different programmes
- Self-evaluation report
- University regulations

Recommendations:

Suggestions for Programme Development

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
3.1 Student Consulting and Support Services	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.2. Master's and Doctoral Student Supervision

- ☐ A scientific supervisor provides proper support to master's and doctoral students to perform the scientific-research component successfully.
- ☐ Within master's and doctoral programmes, ration of students and supervisors enables to perform scientific supervision properly.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

Data related to the supervision of master's/ doctoral students	
Quantity of master/PhD theses	
Number of master's/doctoral students	
Ratio	

Evidences/Indicators

Recommendations:

Suggestions for the programme development

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
3.2. Master's and Doctoral Students Supervision	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Compliance with the programme standards

3. Students Achievements, Individual Work with them	Complies with requirements	X
	Substantially complies with requirements	<input type="checkbox"/>
	Partly complies with requirements	<input type="checkbox"/>
	Does not comply with requirements	<input type="checkbox"/>

4. Providing Teaching Resources

Human, material, information and financial resources of educational programme ensure sustainable, stable, efficient and effective functioning of the programme and the achievement of the defined objectives.

4.1 Human Resources

- Programme staff consists of qualified persons, who have necessary competences in order to help students to achieve the programme learning outcomes.
- The number and workload of programme academic/scientific and invited staff ensures the sustainable running of the educational process and also, proper execution of their research/creative/performance activities and other assigned duties. Quantitative indicators related to academic/scientific/invited staff ensure programme sustainability.
- The Head of the Programme possesses necessary knowledge and experience required for programme elaboration, and also the appropriate competences in the field of study of the programme. He/she is personally involved in programme implementation.
- Programme students are provided with an adequate number of administrative and support staff of appropriate competence.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

Based on information received from the programme self-assessment report, staff CVs, attached documentation, and interviews with staff of the higher education institution, it was revealed that programme implementers are involved in the programme in accordance with the law and internal regulations of the Universities. The number of staff involved in the program from both institutions ensures sustainability of the program. The qualifications of the academic and invited staff are in line with their qualification requirements. It is additional strength of the programme, that academic staff of FDU is also involved in the teaching process.

The staff involved in the implementation of the programme has the appropriate competence, which is evidenced by education, pedagogical experience, work published in the international scientific journals, involvement in the grant projects, international cooperation and participation in the international conferences, as well as participation in the international trainings and seminars.

The invited staff has many years of relevant scientific, academic or rich practical experience in the field.

During the interview, it was revealed that the academic staff involved in the implementation of the programme is actively involved in the process of developing the educational programme.

The program managers from both universities have high competence and extensive experience to lead and coordinate the curriculum development / renewal process. The managers from FDU are recognized experts with great leadership experience. The manager from CU is a young researcher, participant in numerous local and international grant competition projects, as a project manager as well as a researcher. He has published publications in the international scientific journals and was participant of many scientific forums. He is a winner of the numerous scholarships and awards, including the best young scientist award of 2018 working in technology and engineering.

During the interview, the active participation of the administrative staff in the implementation of the programme was highlighted. Their functions and responsibilities are also described detailed in the regulations of Caucasus University.

Number of the staff involved in the programme (including academic, scientific, and invited staff)	Number of Programme Staff	Including the staff with sectoral expertise ⁶	Including the staff holding PhD degree in the sectoral direction ⁷	Among them, the affiliated staff
Total number of academic staff	33	23	11	11
- Professor	4 (2 from FDU and 2 from CU)	4	4	3 (2 with FDU and 1 with CU)
- Associate Professor	7 (2 from FDU and 5 from CU)	3	2	5 (2 with FDU and 3 with CU)
- Assistant-Professor	4 (3 from FDU and 1 from CU)	4	1	3 (with FDU)
- Assistant				
Visiting Staff	18 (2 for FDU and 16 for CU)	12	4	—

⁶ Staff implementing the relevant components of the main field of study

⁷ Staff with relevant doctoral degrees implementing the components of the main field of study

Scientific Staff				—
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Evidences/Indicators

- Self –evaluation report
- The provision of the Caucasus University
- Academic and invited staff documentation
- Interviews with academic and invited staff

Recommendations:

Suggestions for Programme Development

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
4.1 Human Resources	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.2 Qualification of Supervisors of Master's and Doctoral Students

The Master's and Doctoral students have qualified supervisor/supervisors and, if necessary, co-supervisor/co-supervisors who have relevant scientific-research experience in the field of research.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

Number of supervisors of Master's/Doctoral theses	Thesis supervisors	Including the supervisors holding PhD degree in the sectoral direction	Among them, the affiliated staff
Number of supervisors of Master's/Doctoral thesis			
- Professor			
- Associate Professor			
- Assistant-Professor			
Visiting personnel			—
Scientific Staff			—

Evidences/Indicators

Recommendations:

Suggestions for the programme development

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
4.2 Qualification of Supervisors of Master's and Doctoral Students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.3 Professional Development of Academic, Scientific and Invited Staff

- The HEI conducts the evaluation of programme staff and analyses evaluation results on a regular basis.
- The HEI fosters professional development of the academic, scientific and invited staff. Moreover, it fosters their scientific and research work.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

Caucasus University Quality Assurance Department continuously evaluates and analyzes the activities of the academic and invited staff based on the student surveys. Also, based on the analysis of the survey of the satisfaction of administrative, academic and visiting staff, forms conclusions and develops relevant recommendations. Evaluation of academic staff at FDU is done in a similar way, by analyzing students feedback, peer assessment and scientific productivity.

There is a training center at Caucasus University, within the framework of which the university regularly conducts trainings to improve the qualification of the staff.

The University has developed a personnel management policy, which ensures the attraction, retention, encouragement, motivation and development of qualified staff for the positions of academic, scientific, invited, administrative and support staff. The management policies also include incentives, that include evaluating employee performance and managing results, which in turn allows for changes and improvements in remuneration and other benefits.

In order to improve the quality of scientific research work, the Research Promotion Department records the research activities of the academic staff of Caucasus University: involvement in projects funded by local and international donor organizations, as well as the results of research (articles, monographs). Based on the analysis of key metrics, plans activities that will enhance the competence of academic staff in research and innovation.

For further development of the program and involved personnel, it is suggested to have more close collaboration between CU and FDU staff by visiting each other's universities and exchanging experience.

Evidences/Indicators

- Self-evaluation report
- Staff Satisfaction and Evaluation Results 2020
- Staff Job Evaluation Results
- Personnel development activities
- Interview with academic and invited staff

Recommendations:

Suggestions for the programme development

- it is suggested to have more close collaboration between CU and FDU staff by visiting each other's universities and exchanging experience.

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
4.3 Professional development of academic, scientific and invited staff	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.4. Material Resources

Programme is provided by necessary infrastructure, information resources relevant to the field of study and technical equipment required for achieving programme learning outcomes.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

Caucasus University has the appropriate infrastructure and technical equipment to implement the programme. During the site visit of the group of experts, the material and technical base was inspected. In particular, the library, computer classes, computer lab and auditorium.

The number of computer classes and the computer hardware in the classes are sufficient for the smooth implementation of the programme.

Caucasus University has a well-equipped library, which can provide to students electronic textbooks as well as the hardcopies. The main and auxiliary literature of the programme are fully presented here. Also, the library is equipped with computes. The international electronic resources are available for the university staff and students - EBSCO, ScienceDirect, Scopus, etc., through which they can access modern editions. An Elsevier electronic database is also available.

The students and professors have access to these resources both from the university building and from home. An external access is provided through software developed by the University.

During the interviews, students expressed satisfaction with the available resources.

We had video material and online guide to see the program facilities from FDU; it was convincing that FDU has appropriate infrastructure to implement the programme.

Evidences/Indicators

- Self-evaluation report
- On-site visit
- Interview with management, students, academic and invited staff

Recommendations:

Suggestions for the programme development

Evaluation

Component	Complies with	Substantially	Partially	Does not comply
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	requirements	complies with requirements	complies with requirements	with requirements
4.4 Material Resources	x <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.5 Programme/Faculty/School Budget and Programme Financial Sustainability

The allocation of financial resources stipulated in the programme/faculty/school budget is economically feasible and corresponds to the programme needs.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

Caucasus University presented the budget of the programme, which details the sources of income and expenses. The expenditure part includes the costs of teaching: the salary for lecturers, programme preparation-development, the research direction, the programme accreditation, the literature, the internationalization activities and the other expenses. Revenues are based on student fees and the amount allocated from the University Reserve Fund. The programme budget is transparent and reflects the expected revenue of the program. It is economically feasible and corresponds to the programme needs.

As we can see from the programme budget, only CU is responsible for financial support of the program. According to the memorandum of agreement between CU and FDU, each party is responsible for the financial costs for the delivery of its courses. Also, CU should pay the tuition fee for the third year of study to FDU on behalf of students.

Evidences/Indicators

- o Self-evaluation report
- o Program budget
- o Memorandum of Agreement Between CU and FDU
- o Interview with the management

Recommendations:

Suggestions for the programme development

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
4.5. Programme/Faculty/School Budget and Programme Financial Sustainability	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Compliance with the programme standard

4. Providing Teaching Resources	Complies with requirements	X
	Substantially complies with requirements	<input type="checkbox"/>
	Partly complies with requirements	<input type="checkbox"/>
	Does not comply with requirements	<input type="checkbox"/>

5. Teaching Quality Enhancement Opportunities

In order to enhance teaching quality, programme utilises internal and external quality assurance services and also, periodically conducts programme monitoring and programme review. Relevant data is collected, analysed and utilized for informed decision making and programme development.

5.1 Internal Quality Evaluation

Programme staff collaborates with internal quality assurance department(s)/staff available at the HEI when planning the process of programme quality assurance, developing assessment instruments, and implementing assessment process. Programme staff utilizes quality assurance results for programme improvement.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

According to the Self-Evaluation Report, enclosed documents and interview results, CU has enacted an internal regulation regarding “Internal Mechanisms of Quality Assurance and their Efficiency Evaluation”. The Act envisages the concept of quality assurance that “relies on Continuous improvement principle envisaging continuous evaluation and making decisions on the basis of the evaluation findings”. The act defines the quality assurance goals, mechanisms, the rules for application those mechanisms. For the goals of quality assurance teaching and learning, research and governing/management are the subject of periodical internal evaluation. Herewith the efficiency of quality assurance mechanisms is the subject of evaluation as well. The relevant criteria are defined for the evaluation for each indicated process. The Act separately envisages mechanisms for e-learning. Quality assurance process relies on PDCA cycle principles.

University provides program staff participation in the process of drafting, implementing and development of the educational program whilst the results of the research and evaluation that were managed for the quality assurance goals are analyzed and applied for educational program development. The special questionnaires are elaborated for the evaluation processes that is provided by the Quality Assurance Department.

Program staff as well as students periodically evaluate educational programs, program staff and working process at the University. The results of the questioning and evaluation are collected and analyzed by the Quality Assurance Department whilst the final results are presented to the relevant people of the management and the necessary decisions are made based on those results if needed.

University has the internal regulation according to which the educational programs are planned, drafted, implemented and developed. Hereby the relevant person initiates program draft that is based on the research of labor market and analysis of the employer demands. The document of labor market analysis was presented by the University. CU has also presented analysis of the employer requirements for the graduates of the computer science programs.

The procedures for amending and canceling of educational programs are regulated as well as the mechanisms are defined for further support of educational process for the students in case of program

cancellation. University has developed the special electronic platform for drafting, amending and cancellation of the educational programs. Hereby the relevant procedures by responsible people are managed in an electronic way.

The interviews with various people during accreditation visit demonstrated that all relevant people among program beneficiaries were involved in the program development and drafting process of self-evaluation form within their competence.

Program staff is permanently presented the evaluation results of their job and those results are used to plan necessary activities with program coordinator, quality assurance office and other relevant people for further development of the educational program.

Summarizing the results of documentation analysis and interviews it should be mentioned that Caucasus University has the relevant internal regulations that envisage quality assurance policy, relevant mechanisms, requirements and rules for applying those mechanisms that make transparent and complete system of quality assurance based on PDCA cycle.

Program drafting and designing process was managed according to the regulations of the Caucasus University but as the program will be fulfilled jointly Fairleigh Dickinson University personnel was involved as well. Curriculum of the program was elaborated with them. During interview Caucasus University QA Department representatives mentioned that during working process there were not specific contradictions between CU and FDU quality assurance systems that needed to overcome as the cooperation process was not the first one with FDU. FD University is accredited by the Middle States Commission on Higher Education. In addition to the accreditation held by all programs for academic purposes, specialized curricula have applied for and been granted approval by the various recognized professional agencies. For computer sciences FDU has ABET accreditation. Besides, according to the requirements of affiliation to be eligible for, to achieve, and to maintain Middle States Commission on Higher Education accreditation, an institution must demonstrate that it fully meets the following Requirements of Affiliation. Compliance is expected to be continuous and will be validated periodically, typically at the time of institutional self-study and during any other evaluation of the institution's compliance. Once eligibility is established, an institution then must demonstrate on an ongoing basis that it meets the Standards for Accreditation.⁸ FDU has the process of evaluation of University staff and programs by the students as well.

Herewith the Cooperation Agreement between CU and FDU, approved by the National Center for Educational Quality Enhancement of Georgia, in paragraph 4 defines that both institutions are responsible for the set-up Assurance of Learning Team for the part of the program delivered. To coordinate actions and for consistency of delivery and quality, a joint committee formed by the Directors of BA program of both institutions and Deans of both Schools of Technology or other persons designated by them will ensure that the process of assurance of learning is implemented.

Evidences/Indicators

- Self-Evaluation Report and enclosed documents;
- Interview results.

⁸ <https://www.msche.org/standards/#requirements>

Recommendations:**Suggestions for the programme development****Evaluation**

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
5.1 Internal quality evaluation	×	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5.2 External Quality Evaluation

Programme utilises the results of external quality assurance on a regular basis.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

According to the Georgian legislation external quality assurance is accreditation process that is used by the Caucasus University. Hereby the program planning and drafting was fulfilled in accordance to the acting accreditation standards.

While working on self-evaluation report and preparing program for accreditation process, BA program was compared to the Georgian, European and American Universities educational programs in the same field. The results of the comparative analysis were considered for program designing. Relevant benchmarking is attached to the self-evaluation report. BA program was assessed by external experts the evaluations of which are presented as well. Additionally, it is important that in the quality assurance mechanisms University has the regulation to send the program for external evaluation to the experts and make benchmarking from time to time when necessary.

Evidences/Indicators

- Self-Evaluation Report and enclosed documents
- Interview results.

Recommendations:**Suggestions for the programme development****Evaluation**

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
5.2. External Quality Evaluation	×	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5.3 Programme Monitoring and Periodic Review

Programme monitoring and periodic evaluation is conducted with the involvement of academic, scientific,

invited, administrative, supporting staff, students, graduates, employers and other stakeholders through systematic data collection, study and analysis. Evaluation results are applied for the programme improvement.

Summary and Analysis of the Education Programme's Compliance with the Requirements of the Component of the Standard

According to the internal regulation of CU for educational program planning, drafting, implementing and developing the procedures of periodical monitoring and evaluation of the program are defined. It means the involvement of all interested parties such as academic and invited personnel, administrative personnel, students, graduates and employers in the monitoring process and systematic survey of their point of view and requirements. The results of monitoring and evaluation are elaborated and analysed. They are used for the development of educational program. In the end of each semester students evaluate the courses through special questionnaires, indicate their recommendations and requirements, whilst in the end of academic year the whole program is evaluated by the faculty. The self-evaluation report is presented to the Quality Assurance Office which initiates relevant recommendations for further development of the program, if needed.

According to the relevant rules, labor market survey and employers' requirements analysis were considered during program drafting for the curriculum designing and learning outcomes formation. During interview employers confirmed that they cooperate with CU permanently. They looked through the curricula of the BA program and consider it very important not only for Georgian but for the international labor market as well. Besides they consider the joint program as a useful possibility for the students to gain knowledge and experience from foreign colleagues. Furthermore, FDU stated that students of the BA program have the possibility to be employed in New Jersey.

University provides monitoring of the lectures via attending them. It is checked whether each lecture is provided in time. After each semester Quality Assurance Department monitors the students' academic performance, the results of which are processed according to the training courses, lecturers, schools.

Segregated data according to schools are reviewed by the school council and information of University-importance is reviewed by the governing board. The evaluation results are used by the university administration to improve educational programs, teaching and learning process.

Monitoring and evaluation of the educational program is coordinated by QA Department with relevant school providing involvement of the relevant staff as well.

The University conducts annual survey of students, through which students evaluate the services they receive at the University: library, informational, consultation and other services, as well as students' life.

In accordance to the FDU regulations and State accreditation standards, FDU provides self-evaluation process as well from time to time. As the FDU staff explained they provides self-evaluation for each standard and it almost takes place permanently.

Evidences/Indicators

- Self-Evaluation Report and enclosed documents;
- Interview Results

Recommendations:

Suggestions for the programme development

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
5.3. Programme monitoring and periodic review	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Compliance with the programme standards

5. Teaching Quality Enhancement Opportunities	Complies with requirements	x
	Substantially complies with requirements	<input type="checkbox"/>
	Partially complies with requirements	<input type="checkbox"/>
	Does not comply with requirements	<input type="checkbox"/>

Attached documentation (if applicable):

Name of the Higher Education Institution: - Caucasus University LLC.,
Fairleigh Dickinson University (USA)

Name of Higher Education Programme, Level: - Joint Program in Computer Sciences, Bachelor

Compliance with the Programme Standards

Evaluation Standards	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
1. Education Programme Objectives, Learning Outcomes and their Compliance with the Programme	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Teaching Methodology and Organisation, Adequacy Evaluation of Programme Mastering	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Student Achievements, Individual Work with them	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Providing Teaching Resources	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Teaching Quality Enhancement Opportunities	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Signatures:

Chair of Accreditation Expert Panel

Full name, signature – Geoffrey Dick



Accreditation Expert Panel Members

Full name, signature – Mikheil Rukhaia

Full name, signature – George Giorgobiani

Full name, signature – Giorgi popkhadze

Full name, signature – Sophio Ugrekhelidze

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