

Accreditation Expert Group Report on Higher Education Programme Joint Bachelor's Program in Cyber Security

Caucasus University

New Jersey City University

February 21-22, 2022

Report Submission Date April 5, 2022

HEI's Information Profile¹

Name of Institution Indicating its	1. Caucasus University LLC
Organizational Legal Form	2. New Jersey City University (USA)
HEI's Identification Code	Caucasus University LLC – 205050567
	New Jersey City University - 185129
Type of Institution	University

Higher Education Programme Information Profile

Name of the Programme	Joint Program in Cyber Security
Level of Education	Bachelor
Qualification Granted ²	1.Caucasus University LLC - Bachelor of Science in Computer Science 2. New Jersey City University - Bachelor of Science in Cyber Security
Detailed field and Code	0613 Software and Applications Development and Analysis
Indication of relevant secondary education	
subject/subjects/group of subjects	
(In case of Integrated teacher Bachelor's and Master's	
programme and Teacher training programme)	
Language of Instruction	English
Number of ECTS Credits	200
Programme Status (Authorized/ Accredited/Conditionally Accredited/New/Internationally accredited) indicating the relevant decision (Number, Date)	New

Expert Panel Members

¹In case of joint programme, please indicate the HEIs that carry out the programme. If the joint programme is carried out in collaboration with the foreign HEI, indicating ID Number and Organizational-legal form is not obligatory

²If the programme is carried out in collaboration with the foreign HEI and the formulation of the qualification granted after the completion of the programme is different, the qualification is indicated according to the respective university

Chair (Name, Surname,	Geoffrey Norman Dick, St John's University,
University/organization/Country)	USA
Member (Name, Surname,	Tamta Tskhovrebadze, International Black Sea
University/organization/Country)	University, LLC, Georgia
Member (Name, Surname,	Davit Kakiashvili, Grigol Robakidze University,
University/organization/Country)	LLC, Georgia
Member (Name, Surname,	Mikheil Rukhaia, Tbilisi State University, LEPL,
University/organization/Country)	Georgia
Member (Name, Surname,	
University/organization/Country)	Giorgi Beroshvili, Neutrino, Georgia

Accreditation Report Executive Summary

General information on the education programme

The programme is a three-year undergraduate Cybersecurity programme. It is a joint Bachelor's Program between Caucasus University and New Jersey City University. It enables CU students to start a three-year (200 Credits) Bachelor's joint degree program at CU for 2 years and receive a joint Bachelor's degree in Cyber Security through a transfer of credits and the completion of 1 year by New Jersey City University. All students will go to NJ and take 5 courses, in-person, at NJCU.

Brief overview of the accreditation site-visit

The site visit was both on-campus and on-line via Zoom on Monday and Tuesday February 21 and 22, 2022. The panel met Universityrepresentatives, programme directors, academics, officials, students and external stakeholders from both universities. A brief virtual overview tour of the New Jersey facilities was also provided.

Summary of education programme's 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 one instance was a sub-criterion assessed as substantial compliance (1.2 sub-standard) – all others were full compliance)

Summary of Recommendations

The panel recommends that the programme develop a comprehensive set of performance indicators for each of the learning outcomes, andthen identify individual student tasks (based on these performance indicators) that will determine whether or not the learning outcome has been achieved.

Summary of Suggestions

The panel suggests the in Georgia the program administration establish close working relationships with the Georgian security services to ensure the program remains up to date and relevant to the local needs; work together with NCEQE to add Cyber Security in the Georgian Classification of Fields of

Studyand award the respective degree; both institutions think of centralized assessment and administration system, on an electronic platform for shared QA assessment and monitoring; and organize formal and/or informal meetings for the academic and invited staff of the both institutions for providing platform to share experiences, skills and knowledge.

The panel suggests that the NJCU admission requirements be written to clearly indicate (as it is written in the agreement) that students separately apply for NJCU and are requested to have at least 90 ECTS and earned "C1" in all subjects)

The panel suggests that deeper analysis of the Learning Outocmes achieved in lab or practical work would be beneficial, especially in the light of graduates' required professional skills and competencies.

• The expert panel about the argumentative position of the institution:

The institution reviewed a copy of a draft wersoin of this report and had no remarks regarding any factual errors therein.

Summary of best practices (If Applicable)

It seems to the evaluation team that there is considerable enthusiasm for the program in both institutions – this joint administration, objective and practice should promote high academic standards and student achievement

• In case of accredited programme, summary of significant accomplishments and/or progress (If Applicable) n/a

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 institution. Programme learning outcomes are assessed on a regular basis in order to improve the programme

1.1 Programme Objectives

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

Descriptive summary and analysis of compliance with standard requirements

The program has clearly defined programme objectives which incorporates study at both of the institutions involved and provides for exchange of instructors from New Jersey to Tbilisi. The objectives are focused on an important and current need not only for Georgia but for the use of information technology 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 consistent with the mission statement of the universities. 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 should be noted that the program is in its infancy and in future years there may be a need to reevaluate the program objectives to determine whether they are being achieved. It is too early for this assessment to undertaken at this point in the life of the program.

Evidences/indicators

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

Recommendations:
o N/A
Suggestions for programme development:
 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.
Best Practices (if applicable):
 It seems to the evaluation team that there is considerable enthusiasm for the program in both institutions – this joint administration, objective and practice should promote high academic standards and student achievement
In case of accredited programme, significant accomplishments and/or progress
o N/A
Evaluation
o Please mark the checkbox which mostly describes your position related to the programmes compliance with this specific component of the standard
⊠Complies with requirements
□Substantially complies with requirements
□Partially complies with requirements
□Does not comply with requirements

1.2 Programme Learning Outcomes

- ➤ Programme learning outcomes describe knowledge, skills, and/or the sense of responsibility and autonomy, students gain upon completion of the programme;
- ➤ Programme learning outcomes assessment cycle consists of defining, collecting and analysing data;
- ➤ Programme learning outcomes assessment results are utilized for the improvement of the programme.

Descriptive summary and analysis of compliance with standard requirements

The programme has developed Learning Outcomes (8 in all) based on the Objectives of the programme and has mapped these to the individual course syllabi. They cross elements of the

programme to be delivered at both institutions and are clear and appropriate for the programme and represent what the panel sees as an appropriate skill set. A regular review process of their achievement is planned. The programme administration and faculty are well aware of the need for continuous improvement and has begun to develop procedures for its assessment.

The mapping provided in the self-study report indicates that each outcome will be assessed by multiple evaluators and over courses at different levels in both institutions – this should lead to material, which has been developed in Georgia and New Jersey being provided to the students for their learning at both introductory and advanced levels.

The course material developed is consistent with market demands and an assessment system has been developed that should enable an assessment of student achievements. Students reported receiving feedback on their progress. However, it appears that achievement of learning outcomes will be assessed at the course level. For some, this will be appropriate, for others less so. An example here may be useful: For a learning outcome such as "Applies the principles of programming, computer systems, the latest approaches and technologicaltools in practice" might well be assessed by completion of a course focused on these issues. However, completion of a course where "Executes incident response activities and helps to solve cyber-crime investigations" or "Appreciates and shares technology-related values, ethical and social responsibilities with others" are meant to be achieved may not be well assessed by an overall passing grade in the course. See Recommendations below.

The panel noted there was considerable liaison between the New Jersey program and the US security agencies which has resulted in a sound set of learning outcomes. However, there was little evidence of a similar close relationship on the Georgia side. It is considered that this would be beneficial to the program's long-term development.

Evidences/indicators

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

Recommendations:

o It is recommended that the programme develop a comprehensive set of performance indicators for each of the learning outcomes, and identify individual student tasks (based on

these per	formance indicators) that will determine whether or not the learning outcome has
•	ieved. These could involve projects, lab work, assignments, tests, how well students
	teams, etc., rather than the less granular overall course grade.
WOIK III	ceams, etc., rather than the less grandian overall course grade.
Suggestions for p	rogramme development:
o It is sugg	ested that the Georgia program administration establish close working relationships
with the	Georgia security services to ensure the program remains up to date and relevant to
the local	needs.
Best Practices (if	applicable):
o N/A	
In case of accred	ited programme, significant accomplishments and/or progress
o N/A	
T 1 .*	
Evaluation	
	e checkbox which mostly describes your position related to the programmes his specific component of the standard
☐ Complies with	requirements
⊠Substantially co	mplies with requirements
□Partially compli	es with requirements
☐ Does not compl	y with requirements

Programme's Compliance with Standard

Standard	Complies with Requirements	Substantially complies with requirements	Partially Complies with Requirements	Does not Comply with Requirements
Educational programme objectives, learning outcomes and their compliance with the programme	X			

2. Teaching methodology and organization, adequate evaluation of programme mastering

Programme admission preconditions, programme structure, content, teaching and learning methods, and student assessment ensure the achievement of programme objectives and intended learning outcomes.

2.1Programme Admission Preconditions

Higher education institution has relevant, transparent, fair, public and accessible programme admission preconditions

Descriptive summary and analysis of compliance with standard requirements

Prerequisites and procedures for admission to the Cyber Security bachelor's degree programme are in accordance with the current legislation of Georgia: only the holder of a state certificate of full high school education or an equivalent document, who will be enrolled on the basis of the results of the Unified National Examinations, has the right to study. Enrollment is possible without passing the Unified National Examination in accordance with the rules established by the law.

It is important to note, that since the program is joint programme with NJCU, there is a requirement that applicant must hold English B2 level certificate (IELTS-6.0; TOEFL-78; or other equivalent). If applicant does not have such certificate, then he/she should take internal examination provided by the university.

Prerequisites for admission to the programme are available on the university website and are reflected in the programme description.

Enrollment in the programme through mobility is possible in accordance with the law.

The admission procedure and the responsibilities of the sides are clearly given in the memorandum of agreement between CU and NJCU.

Evidences/indicators

- Joint Bachelor's Program inCyber Security description
- Memorandum of Agreement Between CU and NJCU
- Self-evaluation report
- University webpage

Recommendations:

o N/A

Suggestions for programme development:
o N/A
Best Practices (if applicable):
o N/A
In case of accredited programme, significant accomplishments and/or progress
o N/A
Evaluation
o Please mark the checkbox which mostly describes your position related to the programmes compliance with this specific component of the standard
x Complies with requirements
□Substantially complies with requirements
□Partially complies with requirements
□ Does not comply with requirements

2.2 Educational Programme Structure and Content

Programme is designed according to HEI's methodology for planning, designing and developing of educational programmes. Programme content takes programme admission preconditions and programme learning outcomes into account. Programme structure is consistent and logical. Programme content and structure ensure the achievement of programme learning outcomes. Qualification to be granted is consistent with programme content and learning outcomes

Descriptive summary and analysis of compliance with standard requirements

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 NJCU. The programme consists of 200 ECTS (120 US) credits, out of which, 175 ECTS credits belong to the compulsory courses and 25 ECTS credits to the elective courses. The courses indicated in the programme have prerequisites and are adequate.

Almost all stakeholders were involved in the designing the programme (students and graduates were not aware about the structure and content of the programme). Academic staff from both universities were involved in the development of the programme structure and content.

The programme mainly focuses on the modern development of the field and is designed to largely provide both the theoretical knowledge required for Cyber Security and the development of practical skills.

The CU is awarding a bachelor degree in Computer Science, since there is no Cyber Security in the Georgian Classification of Fields of Study. Thus, structure of the educational program more or less covers all the basic courses required for the study of computer science. Good balance is achieved between the general computer science related courses and specific courses about cybersecurity. Thus, the awarded degree is adequate, but it would be better to have Cyber Security in there. The panel hopes, the university will continue to work together with NCEQE to add Cyber Security in the Classification of Fields of Study. Full information about the programme is available on the University website.

Evidences/indicators

- Joint Bachelor's Program in Cyber Security description
- Self-evaluation report
- o University web-page

Recommendations:

o N/A

Suggestions for programme development:

 Work together with EQE to add Cyber Security in the Georgian national classificatory and award the respective degree.

Best Practices (if applicable):

o N/A

In case of accredited programme, significant accomplishments and/or progress

o N/A

Evaluation

o Please mark the checkbox which mostly describes your position related to the programmes compliance with this specific component of the standard

x Complies with requirements

□Substantially complies with requirements

□Partially complies with requirements

☐ Does not comply with requirements	

2.3. Course

- > Student learning outcomes of each compulsory course/subject/module/concentration are in line with programme learning outcomes; Moreover, each course content and number of credits correspond to course learning outcomes;
- ➤ Teaching materials listed in syllabi are based on the core achievements in the field and ensure the achievement of intended programme learning outcomes.

Descriptive summary and analysis of compliance with standard requirements

The learning outcomes of the main specialty courses of the undergraduate education program Cyber Security 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. It should be noted, that CU counts 1 ECTS credit as 25 hours, while NJCU counts US credits as 37.5 hours. Thus, there are some courses which have 5 ECTS in CU, but 3 US credits in NJCU (this is why the programme consist of 200 ECTS credits for CU and 120 US credits for NJCU). 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 Cyber Security 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.

Evidences/indicators

- Joint Bachelor's Program in Cyber Security description
- Self-evaluation report
- o course syllabi

Recommendations:

o N/A
Suggestions for programme development:
o N/A
Best Practices (if applicable):
o N/A
In case of accredited programme, significant accomplishments and/or progress
o N/A
Evaluation
o Please mark the checkbox which mostly describes your position related to the programmes compliance with this specific component of the standard
${f x}$ Complies with requirements
□Substantially complies with requirements
□Partially complies with requirements
□ Does not comply with requirements

2.4 The Development of practical, scientific/research/creative/performance and transferable skills

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

Descriptive summary and analysis of compliance with standard requirements

The Cyber Security educational programme provides the development of practical and research skills in line with the level of the undergraduate program. To achieve the learning outcomes of the programme, it is essential to study the courses that include laboratory and practical work. Development of practical skills is provided by specially designed courses. It should be noted, that the curriculum does not include any industrial practice and/or undergraduate thesis, which would help further improvement of practical and research skills.

Evidences/indicators

- o Joint Bachelor's Program in Cyber Security description
- Self-evaluation report

o course syllabi
Recommendations:
o N/A
Suggestions for programme development:
o N/A
Best Practices (if applicable):
o N/A
In case of accredited programme, significant accomplishments and/or progress
o N/A
Evaluation
o Please mark the checkbox which mostly describes your position related to the programmes compliance with this specific component of the standard
x Complies with requirements
□Substantially complies with requirements
□Partially complies with requirements
□ Does not comply with requirements

2.5Teaching and learning methods

Program is implemented using student centered teaching and learning (SCL) methods. Teaching and learning methods correspond to the level of education, course content, student learning outcomes and ensure their achievement

Descriptive summary and analysis of compliance with standard requirements

The program uses the following teaching methods:

- o Verbal,
- Working on a book,
- o Written work,
- o Demonstration,
- o Case study;
- o Problem-based learning (PBL),

- Group work,
- o Collaborative.

Each course uses several teaching methods that ensure the achievement of the learning outcomes defined in the course. Interviews revealed, that the programme addresses the needs of individual students, although the programme does not support the definition of teaching and assessment methods for international students based on cultural and/or other needs.

Evidences/indicators

- o Joint Bachelor's Program in Cyber Security description
- Self-evaluation report
- o Course syllabi
- o Interviews with academic and invited staff, and students

Recommendations:

o N/A

Suggestions for programme development:

o In developing the programme it is suggested that particular attention be paid to the differences in culture and needs of students in the programme.

Best Practices (if applicable):

o N/A

In case of accredited programme, significant accomplishments and/or progress

o N/A

Evaluation

o Please mark the checkbox which mostly describes your position related to the programmes compliance with this specific component of the standard

x Complies with requirements

□Substantially complies with requirements

 $\square Partially complies with requirements$

☐ Does not comply with requirements

2.6. Student Evaluation

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

Descriptive summary and analysis of compliance with standard requirements

Student evaluation is conducted in accordance with established procedures; it is fair to every student, transparent and complies with existing legislation; In the process of implementation of the educational Programme, the level of achievement of a student's learning outcomes shall be evaluated according to the evaluation system approved by the Order N3 of January 5, 2007 of the Minister of Education and Science of Georgia on the Rule of Calculation for Higher Education Programs with Credits.

In syllabi, the evaluation components and methods are appropriate for the course and its learning outcomes; Although the programme has interesting and flexible Learning Outcomes and teaching Methods evaluation components and methods, it would be better to diversify them, depending on the capabilities of the programme.

Evaluation forms, components and methods are fair, published and known to students in advance, Syllabi are posted on students' electronic portal and during interviews students of neighboring programme mentioned, that they receive guidance before starting courses and before exams.

The regulation on the rules of conducting exams at Caucasus University defines the obligation of a lecturer: Introduce exam results to students and give them developmental assessments. Also, the procedure for appealing the grades (mark) by the student is defined, information about this procedure is available to students. The lecturer is obliged to introduce the results of the midterm / final exam to the students and give them a developmental assessment, The Department inform the students about the results of the midterm / final exam upon their receipt by displaying them in the electronic signs database (The student electronic portal). Within three days after the publication of the results of the midterm / final exam, the student has the right to appeal against the received assessment and request to get acquainted with the corrected work. If student wants to appeal the test result, he / she writes a statement on behalf of the Vice-President in the field of administration and monitoring and reasonably describes what part he / she disagrees with the lecturer's assessment. after that the lecturer, submits a report card (Appendix 2), where respond to the student's statement and, if necessary, changes the grade. In case the student does not agree with the lecturer's decision on his /

her complaint, then he / she shall write to the Vice-President in the field of administration and monitoring, who shall form a commission from the appeal. The commission consists of: Director of Student Services and Educational Process Monitoring Department, Director of Quality Assurance Department, School Representative, University Legal Department Representative, Ombudsman and other relevant field specialists. In case the evaluation of a field specialist differs radically from the evaluation of a subject lecturer, the Commission is authorized to invite an external expert in the field. The Commission shall take one of the following two decisions by a majority of votes:

- leaves the subject lecturer's assessment unchanged;
- Changes the subject lecturer's assessment.

During site visit interviews students from CU as NJCU told that they receive feedback on their strengths and weaknesses. As for the appealing procedure students from CU mentioned that they knew about this procedure but did not use this one. Students from NJCU did not know about such a procedure because they never needed one, but if such a kind situation would ecuare they would feel free to communicate with the lecturer.

In the documents provided by university it is clear that program in Cybersecurity has mechanism of learning outcomes evaluation - "Joint Bachelor's Program in Cybersecurity Mechanism of Learning Outcomes Evaluation" and internal quality assurance department performs efficient mechanisms of the students' academic achievements and the index of employing the monitoring findings for the academic process enhancement.

Evidences/indicators

- o Interviews during site visit with different stakeholders;
- Self-evaluation report;
- Syllabi of the courses in the program;
- The regulation on the rules of conducting exams Caucasus University;
- Statute on student statusCaucasus University;
- Statute on student statusCaucasus University;
- o Internal Mechanisms of Quality Assurance and their Efficiency Evaluation;
- o Joint Bachelor's Program in Cybersecurity Mechanism of Learning Outcomes Evaluation;

Recommendations:

o N/A

Suggestions for programme development:

o N/A

Best Practices (if applicable):
o N/A
In case of accredited programme, significant accomplishments and/or progress
o N/A
Evaluation
o Please mark the checkbox which mostly describes your position related to the programmes compliance with this specific component of the standard
x Complies with requirements
□Substantially complies with requirements
□Partially complies with requirements
\square Does not comply with requirements

Programme's Compliance with Standard

Standard	Complies with Requirements	Substantially complies with requirements	Partially Complies with Requirements	Does not Comply with Requirements
Teaching methodology and organization, adequate evaluation of programme mastering	X			

3. Student achievements and individual work with them

HEI creates student-centered environment by providing students with relevant services; programme staff ensures students' familiarity with the named services, organizes various events and fosters students' involvement in local and/or international projects

3.1Student support services

Students receive appropriate consultations and support regarding the planning of learning process, improvement of academic achievement, employment and professional development

Based on the Self-evaluation Report and relevant documents provided by university, also, Site visit interview results have shown that, in the Caucasus university and New Jersey City University students have opportunity to get appropriate consultations and support regarding the planning of learning process, improvement of academic achievement. In Caucasus university newly enrolled at the beginning of the learning process students are given an orientation meeting to learn about key aspects of the learning process. They are consulted regarding: choosing of subjects, how to use the student online platform, electronic library and other organizational issues. Students can get consultation and assistance without any restriction personally or via electronic email. Memorandum of Agreement between Caucasus University, LLC (The Republic of Georgia) and New Jersey City University (The United States of America) for the Joint Program in Cyber Security states that NJCU will partner with CU to provide student orientations for all students enrolled in the Joint Program; NJCU will ensure students have access to electronic databases in NJCU/affiliate library. Students of this program will be able to get consultation and assistance without any restriction in the Dean's office, at the teaching process management and student registration service, Quality Management Department and other subsidiary structural units. Student will get consultation and help from the responsible lecturer to improve the achievements in a particular course, within the individual work in a weekly basis according to the time indicated in the syllabus of this course. During site visit students from CU as NJCU expressed that they receive appropriate consultations and support regarding the planning of learning process and improvement of their academic and achievement.

Students will be able to recive career development and employment services as the Caucasus university has a career development and employment service which regularly provides vacancies provided by employers to the students via email and implements the necessary procedures for their employment. The university alumni satisfaction survey of 2020-2021 years shows that students express over then medium satisfaction with Caucasus University Career Development and Employment Promotion Services. University has memorandums with a wide range of employers. Employer Satisfaction Survey for 2020-2021 years shows that employer express satisfaction with Caucasus University and their students. Also, during site visit interviews, employers expressed huge interest in this program and said that they would be glad to have the opportunity to offer them jobs and engage them on various projects.

It is significant that students will have opportunity to study one semester in New Jersey City University and get more theoretical and practical knowledge from professors with practical working background like US governmental bodies: NCA; CIA; FBI;

During the visit experts had the opportunity to talk to students from New Jersey City University (USA), who expressed satisfaction with the university's infrastructure and staff. They mentioned that they use different labs, have a security club, and receive a large number of emails offering employment.

Important services for students in Caucasus university provide "Ombudsman Office" which is established at the University for the purpose of consultation and assistance on the Georgian legislation in the field of higher education, protection of students' rights and their liabilities, student status and mobility, - internal grants and Programs, also, exchange Programmes. On the other side NJCU will be responsible for providing application and registration instructions to students for the final year of their enrollment in the Joint Degree program, which includes the maintenance of student records.

During site visit interviews there were introduced already planned international projects like hackathons for new enrolled students. A lot of events like master-classes of the guest visitors and promotional projects organized by university can be seen at university web-site. In NJCU students have a security club and are involved in various projects.

Caucasus university has international agreements for students of the school of computer engineering which provides additional opportunities for students. Student satisfaction survey of 2020-2021 years and interview results shows that students receive information about internal grants and programs, exchange Programs, internal mobility; and in general, they are satisfied with services provided by the University in the process of planning international mobility. Data shows that 7% of survey respondents students participated in international exchange, scholarship, and short-term study programs.

In the current situation Caucasus university has a library space where both printed and electronic books are collected, computers for electronic books are placed in the library. During the visit, literature was selected from the syllabi by the experts, which were found in the University's electronic database. University students have access to international scientific databases not only

from the university space but also from home. The student electronic portal, which is in the process of being updated (Creating new one), was viewed, however the basic information that a student needs in the learning process is available to them. also, during the visit experts had the opportunity to see NJCU library and security lab.

Evidences/indicators

- o Interviews during site visit with different stakeholders;
- Self-evaluation report;
- Syllabi of the courses in the program.
- Memorandum of Agreement between Caucasus University, LLC (The Republic of Georgia) and New Jersey City University (The United States of America) for the Joint Program in Cyber Security
- Caucasus School of Technology Statute
- CU Statute on student status
- Memorandum Agreement among partner universities.
- o Memorandum Agreements with employers.
- Student satisfaction survey of 2020-2021
- o The university alumni satisfaction survey of 2020-2021 years
- Employer Satisfaction Survey for 2020-2021
- Web-site of Caucasus university https://www.cu.edu.ge/en

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o N/A

Suggestions for programme development:

o N/A

Best Practices (if applicable):

o N/A

In case of accredited programme, significant accomplishments and/or progress

o N/A

Evaluation

o Please mark the checkbox which mostly describes your position related to the programmes compliance with this specific component of the standard	
x Complies with requirements	
□Substantially complies with requirements	
□Partially complies with requirements	
□ Does not comply with requirements	

3.2Master's and Doctoral Student supervision – this section not applicable

Master's and Doctoral students have qualified thesis supervisors

Descriptive summary and analysis of compliance with standard requirements

 Describe, analyze and evaluate programme's compliance with the standard component requirements based on the information collected through programme Self-evaluation Report, relevant enclosed documents and Site Visit; the analysis has to reflect problematic issues (if applicable)

Evidences/indicators

o Component evidences/indicators including relevant documents and interview results

Recommendations:

o Proposal(s), which should be considered by the institution to comply with requirements of the standards

Suggestions for programme development:

o Non-binding suggestions for programme development

Best Practices (if applicable):

o Practices, which prove to be exceptionally effective and which may become a benchmark or a model for other higher education programmes

In case of accredited programme, significant accomplishments and/or progress

 Significant accomplishment and/or progress made by the programme after previous accreditation (If Applicable)

Evaluation

o Please mark the checkbox which mostly describes your position related to the programmes compliance with this specific component of the standard

□ Complies with requirements	
□Substantially complies with requirements	
□Partially complies with requirements	
□ Does not comply with requirements	

Programme's Compliance with Standard

Standard	Complies with Requirements	Substantially complies with requirements	Partially Complies with Requirements	Does not Comply with Requirements
Student achievements and individual work with them	x			

4. Providing teaching resources

Programme human, material, information and financial resources ensure programme sustainability, its effective and efficient functioning, and achievement of intended objectives

4.1Human Resources

- ➤ Programme staff consists of qualified people who have necessary competences in order to help students achieve 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. Balance between academic and invited staff ensures programme sustainability;
- ➤ The Head of the Programme possesses necessary knowledge and experience required for programme elaboration. He/she is personally involved in programme implementation;
- Programme students are provided with an adequate number of administrative and support staff of appropriate competence

Descriptive summary and analysis of compliance with standard requirements

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, with the field staff involved in the implementation of the

programme - 33, including 11 academic staff (6 professors, including 3 affiliated professors, 1 associate professor, 4 assistant professors) and 22 invited lecturers. 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 NJCU 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 international the 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.

According to the rules in force at the Caucasus University, in addition to participating in the workload of the academic staff, there is an obligation to participate in scientific research activities, which strengthens the involvement of the staff in the academic and non-academic activities of the University.

The program managers from both universities have high competence and extensive experience to lead and coordinate the curriculum development / renewal process. The managers from NJCU 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.

Overall, panel confirms the competence of the staff involved in the program, commitment of both		
institutions in disseminating and ensuring engagement of the staff in the elleboration of the program		
and related activities.		
Evidences/indicators		
 Self-evaluation report 		
 The provision of the Caucasus University 		
Academic and invited staff documentation		
o Interviews with academic and invited staff		
Recommendations:		
Accommendations.		
o N/A		
Suggestions for programme development:		
o N/A		
O IVA		
Best Practices (if applicable):		
o N/A		
In case of accredited programme, significant accomplishments and/or progress		
o N/A		
Evaluation		
o Please mark the checkbox which mostly describes your position related to the programmes compliance with this specific component of the standard		
x Complies with requirements		
□Substantially complies with requirements		
□Partially complies with requirements		
□ Does not comply with requirements		

4.2 Professional development of academic, scientific and invited staff

➤ HEI conducts the evaluation of programme academic, scientific and invited staff and analysis evaluation results on a regular basis;

➤ HEI fosters professional development of the academic, scientific and invited staff. Moreover, it fosters their scientific and research work

Descriptive summary and analysis of compliance with standard requirements

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. (Documents - "Staff Satisfaction and Evaluation Results 2020", "Staff Job Evaluation Results") Evaluation of academic staff at NJCU is done in similar, analysing students feedback, peer assessment and scientific productivity.

It has been repeatedly mentioned by the academic and invited staff, that the issues raised by them are discussed and considered by the university administration in an interactive manner.

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.

Evidences/indicators

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

Recommendations:
o N/A
Construction of the second of
Suggestions for programme development:
o N/A
Best Practices (if applicable):
o N/A
0
In case of accredited programme, significant accomplishments and/or progress
o N/A
Evaluation
o Please mark the checkbox which mostly describes your position related to the programmes
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4.3Material Resources

Programme is provided by necessary infrastructure and technical equipment required for achieving programme learning outcomes

Descriptive summary and analysis of compliance with standard requirements

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. University Campus has Internet connection of 400Mb/s

provides enough network bandwidth to ensure practical capabilities of Cyber Security events simulation and proper hands-on practices for Cyber Threat Detection & Respond.

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 programmeare 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 of a similar (informatics) program expressed satisfaction with the available resources.

We had Zoom viewing of the program facilities from NJCU; also they provided us with the online tour guide. All these was convincing that NJCU has appropriate infrastructure to implement the programme.

Evidences/indicators

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

Recommendations:

o N/A

Suggestions for programme development:

o N/A

Best Practices (if applicable):

o N/A

In case of accredited programme, significant accomplishments and/or progress

© N/A

Evaluation

o Please mark the checkbox which mostly describes your position related to the programmes compliance with this specific component of the standard

x Complies with requirements

□Substantially complies with requirements

□Partially complies with requirements

4.4Programme/faculty/school budget and programme financial sustainability

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

Descriptive summary and analysis of compliance with standard requirements

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 NJCU, CU should pay certain amount per year to NJCU as a support for each cohort.

Evidences/indicators

Self-evaluation report

□ Does not comply with requirements

- Program budget
- Memorandum of Agreement Between CU and NJCU
- Interview with the management

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o N/A
Suggestions for programme development:
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o N/A
Best Practices (if applicable):
27/4
o N/A
In case of accordited an accommon significant accommishments and/or are conse
In case of accredited programme, significant accomplishments and/or progress
o N/A
Evaluation
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o Please mark the checkbox which mostly describes your position related to the programmes
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□ Does not comply with requirements

Programme's Compliance with Standard

Standard	Complies with	Substantially	Partially Complies	Does not Comply
	Requirements	complies with	with	with
		requirements	Requirements	Requirements
Providing teaching	X			
resources				

5. Teaching quality enhancement opportunities

In order to enhance teaching quality, programme utilizes 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 on a regular basis.

5.1 Internal quality

Programme staff collaborates with internal quality assurance service(s) available at the higher education institution when planning the process of programme quality assurance, creating

assessment instruments, and analysing assessment results. Programme staff utilizes quality assurance results for programme improvement.

Descriptive summary and analysis of compliance with standard requirements

Internal Quality Assurance mechanisms at Caucasus University are defined by the regulation of Quality Assurance Office. Internal quality assurance includes the systemic surveys and evaluations of curricula, services and resources. QA Office focuses on semester and annual surveys, involving all stakeholders for the purpose of analyzing assessment results to maintain the effective monitoring and identify development tendencies. NJCU fully shares and joins CU efforts to develop mechanisms for evaluating the learning outcomes of the program with the participation of the relevant academic staff of the universities and ensuring the coordination of a joint program for quality assurance of the program. In accordance with the evaluation of the submitted documents and online accreditation visit findings, programme evaluation is consistent and assessment results are utilized for programme improvement. Furthermore, the broader evaluation includes annual programme evaluation process overall, team of quality assurance representatives and program directors from partner universities share the principles and mechanisms among partners to ensure proper internal quality evaluation of the programme. Programme quality assurance is based on the PDCA - "plan —do — check - act" principle, partner insitutions centralize the cycle as key to continuous improvements.

Both institutions have similar understandings of the procedures for effective implementation of systematic standards, focusing on verification as a major tool. Monitoring and reporting will be carried out to check whether the processes had reached a predetermined effect, as well as to identify the strengths and weaknesses of the program. Students, graduates, employers, academic and invited staff will be involved in the internal quality assessment process. QA offices cooperate and encourage involvement of the programme staff to ensure the constructive evaluation process, therefore, self-evaluation report of the programme was prepared with active involvement of academic and administrative staff.

Quality Assurance Offices coordinated identifying the weaknesses and challenges while working on self-evaluation report with the staff involved in the programme. Necessity-based and need assessment surveys are usually used by internal quality evaluation process for purposively identifying the problems and ensuring quality improvement interventions. These surveys are targeted to identify the necessities, needs and wants of the students, as well as annual students and staff satisfaction

surveys are conducted for assessing the general administration of the program and availability of services.

The documentation as well as interviews with programme directors from the partner institutions also gave us confidence that quality assurance is taken smoothly in institutions. In fact, quality assurance seems to be a key driving factor in keeping the programme together. The panel was reassured that through a year annual team meetings as well as frequent contacts between programme directors and quality staff, a coordinated approach will be maintained. However, the panel encourages both institutions to work on centralized assessment and administration system, elaboration of electronic platform for shared QA and assessment would be very helpful for similar course evaluation processes, assessment loops and constant monitoring of ongoing QA processes.

Evidences/indicators

- Self-evaluation Report;
- Quality Assurance Department Statute;
- Internal mechanisms of quality assurance;
- Survey reports and forms;
- o Remote interviews.

Recommendations:

o N/A

Suggestions for programme development:

o It is encouraged both institutions to think of centralized assessment and administration system, elaboration of electronic platform for shared QA assessment and monitoring.

Best Practices (if applicable):

o N/A

In case of accredited programme, significant accomplishments and/or progress

o N/A

Evaluation

o Please mark the checkbox which mostly describes your position related to the programmes compliance with this specific component of the standard

x Complies with requirements

□Substantially complies with requirements	
□Partially complies with requirements	
□ Does not comply with requirements	

5.2 External quality

Programme utilizes the results of external quality assurance on a regular basis

Descriptive summary and analysis of compliance with standard requirements

External quality assurance at CU is mainly carried out through Accreditation and Authorization Processes, maintained by the National Center for Educational Quality Enhancement. University reviews the recommendations and suggestions and the findings are introduced to the schools. QA office ensures compliance of the developments with the received recommendations. Since the Cybersecurity programme is new, institution expresses willingness to take all findings into consideration and effectively use it for further development.

In the process of coordinating the development and implementation of the joint educational program, the CU and NJCU apply a joint American and European approach to quality assurance for the joint programs. As CU abides by the European Approach for Quality Assurance of Joint Programs, NJCU ensures alignment with Standard V in accordance with the Middle States Commission on Higher Education Standards for Accreditation and Requirements for Affiliation.

The educational program is periodically evaluated by external experts, including international experts. Cybersecurity programme was evaluated by the Processor of Cyber Security of National Aviation University, Ukraine and field expert at Caucasus Online, LTD.

Both experts positively evaluated programme, underlined its perspectives and importance for preparing qualified professionals in the field, multiculturalism in curriculum, practical skills and professional values.

Evidences/indicators

- Self-evaluation Report;
- Quality Assurance Department Statute;
- Quality Assurance Mechanisms;

o Externa	l Experts evaluations;	
o Remote	interviews.	
Recommendation	ns:	
o N/A		
Suggestions for 1	programme development:	
o N/A		
D (D (* /*	C 1: 11 \	
Best Practices (i	t applicable):	
o N/A		
0 14/11		
In case of accred	lited programme, significant accomplishments and/or progress	
o N/A		
Evaluation		
Evaluation		
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□Substantially co	omplies with requirements	
·		
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☐ Does not comply with requirements		
L Does not comp	y with requirements	

5.3. Programme monitoring and periodic review

Programme monitoring and periodic review is conducted with the involvement of academic, scientific, invited, administrative staff, students, graduates, employers and other stakeholders through systematically collecting and analysing information. Assessment results are utilized for programme improvement

Descriptive summary and analysis of compliance with standard requirements

For programme development and service improvement QA Office at CU ensures constant monitoring and periodical assessment. Assessment and evaluation process involve internal and external actors. Surveys with academic and administrative staff, students, graduates and employers are central tools for implementing strategic visions of the university. Monitoring process is based on

the principles of transparency and sharing, participation, continuity, academic integrity and freedom, accountability. At the end of every compulsory course, students evaluate the course by completing course evaluation form, if the students' number is too low in order to get representative results, focus groups are used for validity. Necessity-based and need assessment surveys are used in order to identify improvements and priorities, to ensure effective monitoring process. Results of the evaluation process are distributed among the stakeholders and are used for the programme improvements.

At the end of each semester, the Quality Assurance Department monitors the students' academic performance and segregated data according to schools are reviewed by the school councils. The evaluation results are used by the university administration to improve educational process.

NJCU envisages monitoring process to be relatively the same. As defined by the agreement, monitoring results and reports will be carried out by a joint team for the program quality assurance, after which the mechanisms for the program improvement and additional activities will be determined.

Conducted interviews with academic and invited staff of both institutions showed that there is an expectation to be more actively engaged to share experiences. As program is jointly administered, organizing formal and/or informal meetings for the academic and invited staff of the both institutions for providing platform to share experiences, skills and knowledge would help program to develop further. As well as programme has a vital possibility to conduct the peer assessment by colleagues from the same programme and from the partner universities as well.

University ensures benchmarking for the best available practices develop an international and competitive programme. Since the programme is unique and new for the Georgian educational market, only international analog programs were benchmarked. Programme shares the experiences of leading universities, especially 4 US universities, whose curricula were analyzed. Many common courses and features have been observed that affected to the elaboration process of the program. Overall, Cybersecurity programme induces both, international and local practices and requirements.

Evidences/indicators

0	Self-evaluation Report;
0	Quality Assurance Department Statute;
0	Quality Assurance Mechanisms;
0	Evaluation forms and Survey Results;
0	The rule of implementation of educational Programs;
0	Remote interviews.
Recom	mendations:
0	N/A
Suggest	tions for programme development:
0	Organizing formal and/or informal meetings for the academic and invited staff of the both
	institutions for providing platform to share experiences, skills and knowledge would help
	program to develop further.
Best Pr	ractices (if applicable):
0	N/A
In case	of accredited programme, significant accomplishments and/or progress
0	N/A
Evaluat	tion
	e mark the checkbox which mostly describes your position related to the programmes ance with this specific component of the standard
x Comp	plies with requirements
□Subst	antially complies with requirements
□Partia	ally complies with requirements
□ Does	not comply with requirements

Programme's Compliance with Standard

Standard	Complies with	Substantially	Partially Complies	Does not Comply
	Requirements	complies with	with	with
		requirements	Requirements	Requirements

Teaching quality	X		
enhancement			
opportunities			

Enclosed Documentation (If Applicable)

HEI's Name: Caucasus University; New Jersey City University

Higher Education Programme Name, Level of Education: Joint Bachelor's Program in Cybersecurity. Level VI

Number of Pages of the Report: 38

Programme's Compliance with the Standard

Standard	Complies with Requirements	Substantially complies with requirements	Partially Complies with Requirements	Does not Comply with Requirements
1. Educational programme objectives, learning outcomes and their compliance with the programme	х			
2. Teaching methodology and organization, adequate evaluation of programme mastering	x			
3. Student achievements and individual work with them	x			
4. Providing teaching resources	x			
5. Teaching quality enhancement opportunities	x			

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Tamta Tskhov rebadze

Davit Kakiashvili