



NATIONAL CENTER FOR
EDUCATIONAL QUALITY
ENHANCEMENT

Accreditation Expert Group Report on Higher Education Programme

Construction

Master's degree

Akaki Tsereteli State University

October 10; 2023

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Tbilisi

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Information about a Higher Education Institution ¹

Name of Institution Indicating its Organizational Legal Form	Akaki Tsereteli State University LEPL
Identification Code of Institution	212693049
Type of the Institution	University

Expert Panel Members

Chair (Name, Surname, HEI/Organisation, Country)	Roode Liias; Tallinn University of Technology, Estonia
Member (Name, Surname, HEI/Organisation, Country)	Irma Garibashvili. LEPL - Georgian Technical University. Georgia
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Member (Name, Surname, HEI/Organisation, Country)	Davit Tepnadze. Georgian Aviation University. Georgia

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)	მშენებლობა
Name of Higher Education Programme (in English)	Construction
Level of Higher Education	Master, Level 2
Qualification to be Awarded ²	Master of Construction Engineering მშენებლობის ინჟინერიის მაგისტრი
Name and Code of the Detailed Field	0732 Building and Civil Engineering
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	Georgian
Number of ECTS credits	120
Programme Status (Accredited/ Non-accredited/ Conditionally accredited/new/International accreditation) Indicating Relevant Decision (number, date)	Conditionally accredited 14.12.21 No.1365959
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 volume of Master programme “Construction” in ATSU is 120 ECTS credits, duration 4 semesters, a semester has 15 weeks. One credit is equivalent to 25 academic hours. The programme was first accredited in 2012. The programme is being implemented at the Department Civil Engineering and Transport of ATSU. The programme has concentrations on Building structures in Georgian and in English, but also concentration on Motorways.

Over the years, admission to the programme has been increasing and currently has averaged to 12-15 students.

▪ Overview of the Accreditation Site Visit

The site-visit of the expert group to ATSU took place on Tuesday, October the 10th, 2023. The expert group had 10 meetings with different university representatives and stakeholders (alumni and employers). Also short observation visits to university library and faculty research and teaching facilities has been organized. Finally, the expert group presented the short summary about their major findings.

All the expert group members jointly participated on all the events scheduled in the visit agenda.

• Brief Overview of Education Programme Compliance with the Standards

- 1. Educational programme objectives, learning outcomes and their compliance with the programme – fully „Complies with requirements“.
- 2. Methodology and organisation of teaching, adequacy of evaluation of programme mastering - „Complies with requirements“.
 - 2.2 The development of practical, scientific/research/creative/performance and transferable skills - „Substantially complies with requirements“.
- 3. Student achievements and individual work with them - fully „Complies with requirements“.
- 4. Providing teaching resources - „Substantially complies with requirements“.
 - 4.2. Qualification of supervisors of Master’s and Doctoral student - „Substantially complies with requirements“.
 - 4.5. Programme/Faculty/School budget and programme financial sustainability - „Substantially complies with requirements“.
- 5. Teaching quality enhancement opportunities - „Substantially complies with requirements“.
 - 5.1. Internal Quality Evaluation – „Substantially complies with requirements“.
 - 5.2. External Quality Evaluation - „Substantially complies with requirements“.

▪ Recommendations

- 2.2. Increase student involvement in local/international conferences, scientific projects and grants.
- 4.2. To assure sustainability of the study programme younger generation academic staff has to be urgently involved for supervision to introduce more new generation Industry 4.0 related topics; relevant action plan by the Faculty would be needed.
- 4.5. The programme is under-financed; civil engineering studies are always expensive and require good funding to create relevant facilities and academic learning environment; SER does not give clear evidence that the study programme leaders have currently relevant resources available. In cooperation

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

with the construction sector stakeholders/employers/entrepreneurs the University and Faculty authorities should address the issue urgently to assure long term quality of Construction studies in ATSU.

- 5.1. It is recommended to carry out a comprehensive evaluation of the programme - the study of all aspects determining the sustainability of the programme, including the preliminary identification of the financial support needed to maintain, renew and develop the resources of the programme.
- 5.2. It is necessary to implement recommendations received in 2021 that have not yet been implemented or have been partially implemented and at the same time are still relevant.

▪ **Suggestions for Programme Development**

- 1.2 It is advisable to restructure the learning outcomes to be more clear and understandable for the wider public, especially for the potential applicants; the current description is ambitious and covers all the aspects of academic life, but the ideas included are not well structured and may be not attractive for the potential candidates.
- 5.1. It is advisable to exclude the possible basis of the conflict of interests. In particular, the combination of the functions of the person responsible for the programme (the head of the program) and the person responsible for determining compliance with the requirements (the person responsible for quality control) should be excluded.

▪ **Brief Overview of the Best Practices (if applicable)⁵**

On the basis of the existing agreement between ATSU and the University of L'Aquila (Italy), the English-language concentration with 8 study courses (60 credits) was included in the programme, which will be led by the professors of the partner European university. If chosen, the student is given the opportunity to study at the University of L'Aquila for two semesters.

In Italy the courses for the "Building Structures" concentration will be taught at the European partner university. Upon completion of the programme, the master's thesis will be defended at both Akaki Tsereteli State University and L'Aquila University. It is worth noting that the defence of the master's thesis can be conducted remotely if needed.

During the interview, the representatives from the University of L'Aquila mentioned that two students came to study in 2020 as part of their agreement with Akaki Tsereteli State University. Additionally, four more students joined in the following years. Both universities are capable to accept more students.

▪ **Information on Sharing or Not Sharing the Argumentative Position of the HEI**

Recommendation 2.2

It is important to note that experts recommend increasing student involvement in local and international conferences, scientific projects, and grants. By doing so, students can develop crucial skills in scientific research and gain valuable experience in their field. This recommendation is considered mandatory and remains unchanged.

Recommendation 4.2

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

During the site visit in ATSU the experts' team could not see any evidences of the role of younger generation potential staff members there. Neither on the meetings with staff nor when studying the examples of the theses provided. Also in SER the necessity of upgrading the academic staff has not been addressed. Accordingly, the recommendation remains unchanged.

Recommendation 4.5

The team of experts agrees that most of the universities worldwide have centralised budgets. During the site visit the experts could not see any evidences how and where the donor organisations have supported the faculty when improving and upgrading the academic environment and the relevant facilities. Accordingly, the experts still strongly recommend to improve the efficiency of working with potential donor organisations and the recommendation done in the report remains unchanged.

Recommendation 5.1

To ensure a full evaluation of the program, it is necessary to take into account the fact that the specific material and technical base of the program requires periodic updating (for example, due to wear and tear) and replenishment (for example, in the case of materials necessary for laboratory experiments), which is impossible without appropriate financial support. Therefore, it is necessary to carry out a complex evaluation of the programme - study of all important aspects for the sustainability of the programme, including the preliminary identification of the financial resources required for the maintenance, renewal and development of the programme resources. This will allow you to determine in advance the resources needed to implement the programme and avoid their mismatch with the needs of the programme. Therefore, the recommendation remains unchanged.

Recommendation 5.2

Firstly, the university did not provide updated information about conferences, trainings, projects and other activities carried out during 2023. Hence it is not possible to confirm that the previous (2021) recommendation ("The university should pay more attention to increasing the scientific productivity of professors and teachers, maintaining it, and professional development of the staff") has been implemented.

Secondly, compliance with the entries (prerequisites for admission to an academic course) recorded in the study programmes and in the programme curriculum. This recommendation is based on the following circumstances - see: Programme Curriculum and syllabus of academic courses. Exceptions: "Technical expertise of construction": 1) in the syllabus - "Wood Constructions", in the curriculum "Wood and Composite Constructions", 2) in the syllabus "Highway design", in the curriculum - "Highway design 1", "Computer modelling in the construction industry "; in the syllabus "Rehabilitation of highways", in the curriculum - "Rehabilitation and modernization of highways". Hence, it is not possible to confirm that the previous (2021) recommendation ("The prerequisites for admission to a academic course written in the syllabuses must correspond to the entries defined in the curriculum") has been implemented.

Based on the above, the recommendation done remains unchanged.

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

Information on the implementation of other recommendations:

#	Recommendation	Implementation of the recommendation
1.	It is recommended that the programme objectives be clearly stated taking into account the field of study, concentration, programme content, international component, to further ensure that the objectives are measurable and achievable.	The recommendation is implemented. see: Programme Curriculum (Programme Objectives)
2.	It is recommended that the learning outcomes of the programme be described by individual concentrations in accordance with current legislation.	The recommendation is implemented. see: Programme Curriculum (Programme Learning Outcomes)
3.	In the prerequisites for admission to the programme, the requirement of English language B2 level should become mandatory for English-language and Georgian-language concentrations.	The recommendation is implemented. see: Programme Curriculum (Programme Admission Preconditions)
4.	The specificity of the optionality of concentrations, as well as the volume of at least 50% of the total number of programme credits for each concentration must be observed. The structure of the programme should be written in such a way that it is easy to understand.	The recommendation is implemented. see: Programme Curriculum (Distribution of academic courses according to semesters)
5.	It is recommended to review the volume of concentrations and assign an equal amount of credits to them.	The recommendation is implemented. see: Programme Curriculum (Distribution of academic courses according to semesters)
6.	The problem of overlap of the topics provided by the syllabus of the training courses should be eliminated.	The recommendation is implemented see: syllabus of academic courses
7.	It is recommended to adjust the evaluation criteria of the master's thesis in terms of point distribution.	The recommendation is implemented see: Syllaby "Master thesis"
8.	It is recommended to bring the content of the academic course "Reinforced Concrete Structures" into line with the level of education.	The recommendation is implemented. see: syllaby "Concrete and reinforced concrete structures"
9.	It is recommended to review the status of the educational courses "Psychology of Pedagogy" and "Pedagogical Practice" and to separate them from elective courses of the main field of study.	The recommendation is implemented. see: Programme Curriculum (Distribution of academic courses according to semesters)
10.	It is recommended that the teaching methods in individual courses be consistent with the course content and learning outcomes.	The recommendation is implemented. see: syllabus of academic courses
11.	It is recommended to comply with the qualification requirements for the master's thesis (structure, content, relevant literature and the manner of design).	The recommendation is implemented. see: Completed master's theses
12.	It is recommended to align the records of several documents (Instruction for the development of a higher (academic) educational programme, annex 4-EP-QA 1.1) with the National Qualifications Framework and the Classifier of Fields Study.	The recommendation is implemented. see: Document "Instruction for the development of a higher (academic) educational programme, annex 4-EP-QA 1.1)
13.	It is recommended to implement internal quality monitoring mechanisms to ensure the achievement of the learning outcomes of the programme and the continuous development of the programme.	The recommendation is implemented see: Submitted documents (Scheme for assessing learning outcomes; Assessing learning outcomes, 2022; Internal evaluation of the programme by the faculty quality assurance service; Analysis of similar programmes; Reports of the faculty quality service 2020-2021, 2021-2022; Analysis of programme evaluation by graduates, 2021-2022; Evaluation of the programme by students).
14.	Master's Theses should be monitored to determine compliance with standards set by the institution.	The recommendation is implemented see: Completed master's theses

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 aim of the Master programme “Construction” is to train highly qualified professionals in the field of construction engineering by providing systematic and comprehensive knowledge about the latest technologies in the field of construction, generating new ideas for construction, and developing the ability to explore and solve complex, non-standard problems in the field. The aims are:

- To provide graduates with the skills necessary to lead the design, construction and maintenance of construction facilities using new strategic approaches.
- To provide the specialists with knowledge about the modern achievements of the building science, including the latest methods and approaches; the ability to contribute to the development of the construction field by using the above knowledge, observing the principles of sustainable construction and reduction of the negative environmental impact.
- To provide graduates with the skills necessary to pursue further study at the next educational level, to lead continuous professional development independently, to conduct and present research based on the principles of academic integrity.

Stakeholders of the programme have been actively involved in the formation of objectives: for the university staff, students, graduates and employers have been working together. Also foreign best practices have been used, including benchmarking data, actual experience and recommendations by foreign partner universities.

Compliance of the goals of the programme with the university's mission statement is ensured by the structure of the master educational programme and increasing interest by the professionals in the field. Demand for graduates is assured taking into account the trends of the labour market and orientation of teaching when solving practical problems. The structure of the programme provides for prospects of acquiring knowledge and skills necessary for practical work in construction engineering. According to the demand by the labour market, the programme provides knowledge based on modern information and innovative technologies in construction. Formation of skills for generating new ideas and applying them in practice in construction design, production and consultancy services are assured.

Evidences/Indicators

- Educational programme
- Analysis of similar programmes
- ATSU's web page <https://atsu.edu.ge/ge/home>
- Strategic development plan of the university https://atsu.edu.ge/ge/strategic_plan
- Meetings with the authorities of ATSU and with the academic staff

Recommendations:

- N/A

Suggestions for the Programme Development

- N/A

Evaluation

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

Programme learning outcomes are as follows:

1. To critically understand the fundamental and applied theories of solving the construction issues.
2. To analyse new knowledge and technologies in the field of construction and correlate this with the specific tasks for research.
3. To calculate and design buildings and different structures using existing methods and interpreting them in a new way; to plan the construction process using the known methods, as well as to select the reasonable options for solving the problem when developing project documentation.
4. To actively use information technology in professional activities.
5. To survey the condition of properties of structures and buildings using qualitative and quantitative assessment methods.
6. To undertake research in compliance with the rules of professional ethics; to present research findings in professional and academic publications.
7. To determine the needs and possibilities for raising the qualification and advancing to the next stage of his/her studies, based on the learning outcomes and the analysis of the labour market.

8. To consider issues of man-made hazards when solving practical difficulties.

Concentration on Building Structures

9. To design the building structures of different shapes, purposes, materials and working conditions.

10. To use modern technologies, planning the process of production of building structures and using them in the construction process.

Concentration on Motorways

11. To design motorways of different purposes, construction properties and working conditions.

12. To plan the process of construction of new road structures and rehabilitation of existing roads using advanced technologies for different operating conditions.

Learning outcomes of the programme are measurable and actually reflect the knowledge and skills acquired by the master students. The learning outcomes are in complete compliance with:

- the objectives of the programme - the learning outcomes point out systematic and comprehensive knowledge about the latest technologies in the field of construction engineering, generating new ideas for construction, and developing the ability to explore and solve complex, non-standard problems of the field.
- the programme learning and detailed field requirements - the learning outcomes of the programme ensure that the graduated specialists have the appropriate knowledge and skills to manage planning, design, installation, construction, testing and maintenance of public, commercial, industrial and residential buildings and transportation systems at a high-tech level.
- the requirements of the level descriptor - according to the learning outcomes, the master students are expected to have in-depth, systematic knowledge about the field, critical understanding, the ability to apply some of the latest achievements of the field and develop new, original ideas for innovation; to conduct research independently, following the principles of academic integrity, using the latest methods and approaches; to take into account social and ethical responsibilities and academic ethics standards in his/her activities; to determine the need and prospect for raising qualifications and continuing education.
- the labour market demands - when optimizing the learning outcomes of the programme, the results of new studies of the labour market, graduates, academic staff and students have been used. The content of the results has been adjusted accordingly. The learning outcomes by concentration for the Building Structures and for the Motorways have been added.

Evidences/Indicators

- Educational programme
- Map of the relationship between programme objectives and learning outcomes
- Meetings/interviews during the visit to ATSU

Recommendations:

- N/A

Suggestions for Programme Development

- It is advisable to restructure the learning outcomes to be more clear and understandable for the wider public, especially for the potential applicants; the current description is ambitious and covers all the aspects of academic life, but the ideas included are not well structured and may be not attractive for the potential candidates.
- **Evaluation**

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
1.2 Programme Learning Outcomes	<input checked="" type="checkbox"/>	<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 institution has developed the document "Programme evaluation procedure (EP-QA 1.2)", according to which the mechanism of evaluation of the programme includes direct and indirect evaluation methods (for example, surveys of students, academic staff, employers, graduates; analysis of graduate employment; analysis of students' academic performance, etc.). To evaluate the programme, questionnaires prepared in advance are used, in which interested persons (students, graduates, employers) indicate their opinion. Also, several maps have been developed to analyze the programme content, objectives and planned learning outcomes.

One of the mechanisms for evaluating the programme is considered to be confirmation of the correspondence between goals and results, as well as the possibility of achieving them. The alignment of the programme's learning outcomes and objectives is illustrated by the alignment map (see Annex "Objectives and Outcomes Map"). Also, there is a map indicating which teaching course/component provides the development of which learning outcome in three progressive steps - 1. Familiarization; 2- Deepening; 3 - Reinforcement. (see Annex "Curriculum Map").

The direct mechanism for evaluating the learning outcomes of the programme comprises the determination of the target marks of the programme and monitoring of the progress of their achievement. The head of the programme and the representatives of the quality assurance service noted that a mechanism for evaluating the achievement of the programme results has been developed - setting a target mark for each result of the programme and comparing the results with them. The features of this mechanism are indicated in the document "Learning Outcomes Assessment Scheme", in which for each programme outcome the assessment rubric (the programme component involved in the formation of the programme outcome) and the target (score and number of students achieving this benchmark) are determined. According to the above document, evaluation is a process that determines how well students have achieved the learning outcomes of the programme and how the programme can be improved. All learning outcomes of the programme must be assessed at the end of the programme when these data are analysed and compared to target marks. The permissible error is 10%. The results of the assessment are subject to study and analysis, on the basis of which

mechanisms and recommendations for responding to improve the situation will be developed. The representatives of the quality assurance service explained that the comparison with the target marks will take place after the completion of the entire cycle of the programme (2 years). At the same time, the academic performance of students is subject to annual review (the use of this mechanism is confirmed by the document "Evaluation of Learning Outcomes, 2022" submitted by the institution).

Based on the results of the studied documentation and interviews, it should be noted that the institution has developed relevant mechanisms for evaluating the learning outcomes of the programmes. Additionally, the documents submitted by the institution, the results of the interview and the abovementioned circumstances together led to the evaluation of this component of the standard as "Complies with requirements".

Evidences/Indicators

- "Programme evaluation procedure (EP-QA 1.2)";
- Objectives and Outcomes Map (Programme Annex);
- Curriculum Map (Programme Annex);
- "Learning Outcomes Assessment Scheme";
- Interview results.

Recommendations:

- N/A

Suggestions for the Programme Development

- N/A

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	<input checked="" type="checkbox"/>	<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 master's programme in Construction at Akaki Tsereteli State University has been developed in compliance with the Educational Programme Quality Assurance Policy (EP-QA) currently in force. This policy is based on the Academic Council Resolution (No. 49 (17/18) of February 9, 2018 and Resolution No. 39 20/21, 15.07.2021). The EP-QA document lays out the guidelines for initiating, planning, and approving the educational programme (EP-QA 1.1) as well as the evaluation procedure for the programme (EP-QA 1.2). The master's educational programme "Construction" has been drawn up by the quality assurance policy of educational programs, which includes procedures such as EP-QA 1.1, EP-QA 1.2, and EP-QA 1.3. The ultimate goal of this policy is to establish a framework for creating, developing, and approving new academic and professional educational programs while defining the key requirements and the individuals responsible for implementing these procedures. The quality assurance policy of educational programs also involves determining the measures required for the development of existing academic and professional educational programs, identifying the responsible individuals for implementing these measures and defining the ways of implementation. Additionally, the policy involves identifying the necessary activities, measures, criteria, and indicators for evaluating the current academic and professional educational programs, determining the persons responsible for conducting these evaluations and defining how to implement these activities and measures. The Programme is designed according to HEI's methodology for planning, designing and developing education programmes.

The volume of the programme is 120 credits, which are distributed as follows:

- Compulsory courses respective to the main field of study - 25 credits.
- Elective Concentrations:
 1. Concentration – Building Structures (Georgian language) - 90 credits.
 2. Concentration - Motorways - 90 credits.
 3. Concentration – Building Structures (English-language) – 90 credits.
- Free component - 5 credits.

In the third semester, the student will be required to study compulsory courses that correspond to the content of their main field of study. On the other hand, elective concentrations will be studied in the first, second, and third semesters. During the third semester, the student's focus will solely be on completing and defending their master's thesis.

The programme offers an English-language concentration called "Building Structures" based on the existing agreement between Akaki Tsereteli State University and L'Aquila University. This concentration comprises of 8 study courses (60 credits) that will be led by professors from the partner European university. The list of courses are as follows: -Continuum Mechanics: solid and fluids; Timber Engineering; Stability and Bifurcation of Structures; Mechanics of Plates and Shells; Computational Structural Mechanics; Discrete and Continuum Models in Mechanics; Advanced Open Channel Flow and Hydraulic Structures; English as a foreign language. Based on the students' interviews, the training courses for the "Building Structures" concentration will be taught at the University of L'Aquila in Italy, a partner European university. Upon completion of the programme, the master's thesis will be defended at both Akaki Tsereteli State University and L'Aquila University. It is worth noting that the defence of the master's thesis can be conducted remotely if needed.

The concentration of "Motorways" offers students such training courses as - Road-building materials; Road machines; Highway design; Rehabilitation and modernization of highways; Computer modeling in the construction industry; Highway design 2; Construction of highways in complex geological and climatic conditions; Technical translation; Master's thesis.

Construction Constructions (Georgian) offers students such training courses as - Concrete and reinforced concrete structures; Wood and composite structures; Dynamics of structures; and Metal structures; Computer modelling in the construction industry; Stresses and strains in welded constructions; Hydraulics of open beds and hydro-technical structures; Master's thesis.

Within all three concentrations, the master's thesis is prepared and defended in the fourth semester. As part of the programme, students have the opportunity to choose a Free component (5 credits) that corresponds to the content of their main field of study. The options available include special chapters of mathematics, special chapters of theoretical mechanics, mathematical modelling in engineering, Educational psychology, Construction logistics, and Construction management.

The following points are defined in the master's education programme:

- Aim of the Programme
- Programme prerequisites
- Programme analogues
- Teaching methods
- Aim of the Programme
- Learning outcomes (General and branch-specific competencies).
- Teaching methods.
- Structure of the Programme
- Study Plan

Qualification awarded: Master of Construction Engineering.

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

Evidences/Indicators

- o Master Educational programme “Construction“.
- o Curriculum map.
- o Quality assurance service policies.
- o Interview results.

Recommendations:

- o N/A

Suggestions for the programme development

- o N/A

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	<input checked="" type="checkbox"/>	<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 academic courses of the programme have been developed according to the previous accreditation requirements and the rules established by the accreditation standards.

The development team has more clearly specified programme objectives, learning outcomes and curriculum map, on the basis of which the links between learning outcomes and study courses and activities were defined. The objectives, learning outcomes and content of the study courses were determined. The amount of academic work to be performed was determined and the number of course credits was determined.

The objectives and outcomes of the courses provided by the programme are in compliance with the objectives and outcomes of the programme and provide knowledge and competences of the appropriate level of qualification, which is focused on practical activities and continuing studies at the next level of higher education.

The study course is described in the syllabus, which includes the following information: course title, course type, number of credits with reference to relevant contact and independent hours, course provider, course objective, study course format, learning outcomes, assessment system and criteria, learning/teaching methods, educational resources, course content and so on.

The course syllabus describes in detail the student assessment forms, methods, and indicates the compulsory and free elective literature recommended for studying the course, which is available in the university library in printed and/or electronic form. Access to literature is possible both directly in the library and remotely using the library website. Students can reserve both the desired literature and the workspace. The study material specified in the syllabus is based on the current achievements of the field of study and ensures the full achievement of learning outcomes of the programme.

Evidences/Indicators

- Master's degree programme and training course syllabi
- Curriculum map
- "Educational programmes quality assurance concept
- ATSU library - <https://library.atsu.edu/ge/ge/home>
- Agreement with partner university

Recommendations:

- N/A

Suggestions for the programme development

- N/A

Evaluation

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

Compliance of the Programme with the Standard

1. Educational programme learning and their compliance with the programme objectives, outcomes with the	Complies with requirements	<input checked="" type="checkbox"/>
	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

The educational institution has outlined the admission requirements for the programme in its curriculum. These conditions specify the criteria that individuals must meet in order to be considered for admission into the program.

A person holding at least a Bachelor's degree or an equivalent academic degree, who will be enrolled based on the results of the master's exams (common master's exam and the exam/exams defined by ATSU), has the right to study at the Master's program.

Programme enrollment requirements:

- Passing the exam in the speciality (the exam shall be written and includes 30 closed and 10 open questions from the construction bachelor's profile courses. The total score is 100 points. Minimum competence is 51 points);
- Knowledge of the English language at the B2 level (proved by: mastering at least 20 credits of English in the appendix of the bachelor's diploma or by passing an exam at the ATSU or by presenting an internationally recognized certificate/document).

The rules for conducting internal university exams are defined by Akaki Tsereteli State University.

In addition to the above, enrolment in the programme without passing the master's exams is possible according to the rules established by the Ministry of Education and Science of Georgia. Enrolment in the programme is

possible through internal and external mobility, which is regulated by the order of the Minister of Education and Science of Georgia dated February 4, 2010 No. 10/N - "On approval of the procedure and fees for transferring from one higher educational institution to another higher educational institution" and the Resolution of the Academic Council No. 67 (21/22), 23.07.2022) " On the procedure for obtaining, suspending, terminating, restoring, mobility, qualification and recognition of received education status of a student" approved by Akaki Tsereteli State University.

The higher educational institution has taken measures to ensure that its admission procedures are appropriate, transparent, fair, public, and accessible to all. These measures aim to enable the inclusion of individuals with relevant knowledge and skills into the programme, which in turn ensures that the programme's learning outcomes are achieved.

Evidences/Indicators

- Master educational programme "Construction".
- Resolution No. 12 (17/18) of the Academic Council of the University of June 4, 2018 "On the procedure for obtaining, suspending, terminating, restoring, mobility, qualification and recognition of received education" status.
- Self-Evaluation Report of Higher Education Programme.
- University website: www.atsu.edu.ge
- Interview results.

Recommendations:

- N/A

Suggestions for the programme development

- N/A

Evaluation

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

During conversations with the representatives of the educational institution, it was highlighted that the master's programme lays emphasis on the development of students' practical, scientific, research and

transferable skills. They mentioned that the programme has a well-structured curriculum that includes practical and laboratory studies to help students acquire practical and research skills that align with the learning outcomes of the program. It was mentioned during a conversation with the representatives of the educational institution that practical and laboratory classes are conducted at the university by qualified professors and laboratory assistants who are specialists in their respective fields. The professors and assistants provide guidance and supervision to the students during these classes to ensure that they gain the necessary practical experience and knowledge.

As per conversation with the representatives of the educational institution, the university has signed memorandums with several organizations, which allow students to conduct research practices if necessary. This provides students with the opportunity to gain hands-on experience in their respective fields and apply the knowledge they have gained during their studies to real-life situations.

During the interview, the representatives from the University of L'Aquila (Italy) mentioned that two students came to study in 2020 as part of their agreement with Akaki Tsereteli State University. Additionally, four more students joined in the following years. According to the representatives, their partnership with Akaki Tsereteli State University is still ongoing, and they are planning to send more students to the University of L'Aquila in the coming years. L'Aquila University will fully fund the students, covering the costs of accommodation, meals, and travel. They also mentioned that Akaki Tsereteli State University can accept up to 10 students annually, and all of their expenses will be covered by L'Aquila University. As per conversation with the representatives of the educational institution, last year Georgian students were sent to other cities to attend an industry conference to get acquainted with the latest developments in the industry. This was also confirmed by the students. The representatives also mentioned that they plan to organize a joint conference between the two universities in the near future.

As per conversation with the representatives of the educational institution, the professors take great care to involve the students in various grant and research projects. This provides the students with opportunities to gain practical experience and apply the knowledge they have gained during their studies. The professors also provide guidance and mentorship to the students during these projects. In the self-assessment report of the accreditation of the higher educational programme, the promotion of student's involvement in research projects is defined as an area to be improved. The institution plans to implement internal grant projects, to update laboratories.

The educational programme offers a range of courses including Fundamentals of Scientific Writing, Experiment Planning and Analysis, Research Practice, Computer Modelling Courses, and Master's Thesis. The purpose of teaching the mentioned subjects is to give the student practical skills in planning an experiment, preparing research, conducting experimental measurements, processing the obtained results, and analysing and drawing conclusions. Also, the student was given knowledge about the theoretical foundations of scientific research, and the principles of academic integrity in conducting research. It should be noted that within the framework of the master's thesis, the current issue of the field is researched and the results are presented to the commission. This issue develops practical and research skills in students.

In order to develop practical and research skills corresponding to the learning outcomes of the programme, the training courses of the master's educational programme include practical and laboratory studies. These studies are mainly conducted on the basis of the university, and students are guided and supervised by qualified professors and laboratory assistants who are specialists in the field. Additionally, during the interview, it was noted that the university has signed memorandums with various organizations where research practice can be conducted if necessary.

After analyzing the completed questionnaires submitted by the institution, it was established that 18% of the surveyed students believe that the most important condition for improving the educational process is the renovation of the laboratories. Additionally, 12% of the surveyed students believe that increasing practical classes will lead to more interest in them. When asked whether the educational programme provides theoretical knowledge and development of practical skills, 95% of the surveyed students gave a positive answer. Moreover, the institution promotes the involvement of students in cultural and cognitive activities such as brain-ring and "what? where? when?" as well as social projects.

Programme Substantially complies with requirements for 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.

Evidences/Indicators

- o Faculty strategic development plan.
- o Memorandums of mutual cooperation with industry organizations.
- o scientific and social activities of students;
- o survey results;
- o Results of interviews with graduates;
- o Results of interviews with representatives of the institution and students;
- o Results of interviews with L'Aquila University representatives;
- o Agreement with L'Aquila University.

Recommendations:

- o Increase student involvement in local/international conferences, scientific projects and grants.

Suggestions for the programme development

- o N/A

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"/>	<input checked="" type="checkbox"/>	<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

It is important to note that the curriculum describes the methods used to achieve learning outcomes. In order to reach the programme's objectives, various teaching methods are employed, such as verbal or oral methods like narrative, lectures, seminars, and heuristic (question-and-answer) methods, as well as book work, written work, laboratory, and demonstration methods. In addition to the teaching methods previously mentioned, the programme also employs other methods such as induction, deduction, analysis and synthesis method, practical methods, action-oriented method, group work, and cooperative learning. These methods are carefully selected and applied to ensure that the programme's learning outcomes are achieved effectively.

In the learning process, the relevant activities of teaching-learning methods used may vary depending on the specifics of each study course. These methods are reflected in the programme (syllabi) of the relevant study course and may include discussion/debate, cooperative learning, group work, and demonstration method. These methods are carefully chosen to ensure that the learning objectives of each course are met in the most effective way possible. In the teaching-learning process, the programme uses a variety of methods to achieve the learning outcomes, including inductive and deductive methods, synthesis and analysis methods, verbal and written work methods, laboratory method, practical methods, explanatory and demonstration methods. These methods are selected based on the specific requirements of each course and are reflected in the programme (syllabi) of the relevant study course. The programme's objective is to provide a comprehensive and effective learning experience for students through the use of appropriate teaching-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

Evidences/Indicators

- Master educational programme "Construction".
- Syllabus of the subject.
- Results of interviews with professors.
- Results of the interview with the programme manager.

Recommendations:

- N/A

Suggestions for the programme development

- N/A

Evaluation

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

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

The student evaluation scheme presented in the educational programme is realistic and achievable as evidenced in the self-evaluation report (SER), Programme and syllabi and interviews at site visit. The evaluation system is based on requirements of Georgian legislation. Within the framework of each course, individual methods, forms and components of student evaluation are presented and written out in every syllabus and assessment of course objectives and learning outcomes achieved through specific and measurable criteria and rubrics.

The evaluation system, methods and forms operating within the conservatory are based on the Order No. 3 of the Minister of Education and Science of Georgia dated January 5, 2007 and provides for the following scheme:

a) five types of positive assessment:

- (A) Excellent – 91-100 points.
- (B) Very good – 81-90 points.
- (C) Good – 71-80 points.
- (D) Satisfactory – 61-70 points.
- (E) Acceptable – 51-60 points.

b) two types of negative assessment:

- (FX) Student could not pass examination – 41-50 point that means that she/he is required to work more for passing the exam, and that she/he is entitled to retake exam only once after individual work;
- (F) failed to pass –40 points and lower that means that the work done by student is not sufficient and she/he has to redo the course.

Additional criteria for assessing student achievement in the course are defined in the appropriate syllabus.

The Master's thesis must be evaluated in the same or the next semester in which the student completes work on it.

Prerequisites for admission to master's thesis defence are:

- Public discussion of the thesis at the department, where the graduate student presents a report on the work performed. Minutes of the department meeting are being prepared for the public discussion.
- The Master's thesis is checked for plagiarism after a preliminary review at the relevant department under the conditions determined by the rules of execution of the master's thesis adopted at the university. Minutes of the meeting of the department and a statement about the absence of plagiarism in the Master's thesis will be submitted to the Dean's office.

The Master's thesis is assessed once (with a final assessment) by the following criteria:

Final assessment shall be made on a 100-point system, which includes: Assessment criteria	Maximum assessment score for each criterion
The relevance of the problem	20
Effectiveness and novelty of problem-solving methods	30
Compliance with standards of paper formatting	10
Skill of presentation of research findings	20
Answers to questions and recommendations	10
Presentation material	10

Evaluation components Transparent evaluation components and criteria are used in the assessment of student knowledge, which ensures the awareness of the student about the achieved results and ways of improvement. The assessment criteria and components at the ATSU are in accordance with the norms established by the Georgian legislation and it is multi-component. Assessment forms and criteria are detailed in the syllabi of the training courses/components. Students are receiving feedback about their progress from teaching staff on every level of their studies.

During interviews students confirmed that their assessment is based on objectivity and transparency. And in case of questions or misunderstandings, they have opportunity to look through their quiz or exam papers get answers from professors/academic staff and appeal evaluation if needed. The master's student has the right to protest the decision of the defence committee no later than 5 days after the master's thesis assessment is announced. He/she should apply to the chairman of the defence commission with a corresponding statement. If the master's student's protest is found right, the appeal application is submitted for review to the dean of the relevant faculty, who creates an appeal commission consisting of at least three persons implementing the relevant training components of the field, none of whom participated in the initial evaluation of the master's student. The appeal commission makes the following type of decision:

- On return and re-examination of the master's thesis defence to the commission;
- About leaving the obtained assessment;
- On leaving the appeal application unconsidered in case of submission of an unsubstantiated application.

The appeal commission is obliged to justify the decision in writing. The decision of the appeal commission must be notified to the master's student within 5 days at the latest.

Evidences/Indicators

- Self-evaluation report
- Resolution No. 6 (22/23) on the approval of the student evaluation system at Akaki Tsereteli State University (amendment to Resolution No. 5 (17/18) of the Academic Council of September 15, 2017)
- The rules of appeal of the exams approved by the resolution No. 10 (17/18) of the Academic Council of November 10, 2017
- Programme and Syllabi
- Interview results

Recommendations:

- N/A

Suggestions for the programme development

- N/A

Evaluation

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

ATSU has various students' services implemented focused on students' development and support activities. Students are involved in HEI everyday life. From self- evaluation report and site visit we have got information that students and graduates were involved in programme development. During interview students noted that they were involved in programme evaluation process in different ways, like: evaluation of academic/ invited staff, programme structure, administration etc. Evaluation team was able to check the electronic platform (LMS) where students are getting these questionnaires to assess their professors/ academic staff. Students are getting schedule for the semester, checking their study progress and using it as a communication tool with administration or teaching staff.

To help with integration process at the HEI at the beginning of their student life at ATSU students have orientation meeting where they are getting acquaint with university regulations and program. For easy communication every student has account in "Electronic dean's office", where they are able to send and receive information about different events related with learning process and extracurricular activities.

Student support and development service is actively functioning in the university. The said service operates in the following directions:

- Organization of electronic movement of student statements;
- Promotion of career development of students;
- Students' ombudsman;
- Students' psychotherapist;
- ATSU alumni network.

Since 2014, a student career development centre has been operating within the framework of the student support and development service at the university, the main functions of which are:

- Continuous monitoring of vacancies in the labour market and providing information to students;
- Attracting potential employers for mutual cooperation;
- Participation and organization in employment forums;

- Arranging various incentive or informational events, meetings with employers, in order to promote the rapprochement of students and employers and the exchange of information between them;
- Organization of special training courses to promote career growth;
- Financial assistance and promotion of employment of students with disabilities, as well as other vulnerable groups (socially vulnerable, displaced families and others);
- Conducting seminars promoting career development and employment of students (creating a CV, writing a motivational letter, preparatory consultation for an interview).

Beside the academic processes students have opportunity to participate in different projects, sport activities, excursions organized by students' self-government.

Students have opportunity to participate in double degree programme with University of L'Aquila (Italy). The programme considers learning or/and research component. Students are able to study one year in Italy, finish second year studies in Georgia and after thesis defence in both Universities get two diplomas. Our group had opportunity to interview students and graduates of this program.

Evidences/Indicators

- Self-evaluation report
- Provisions of services supporting the management of the educational process in the university; Teaching process management service (atsu.edu.ge)
- Student support and development office https://atsu.edu.ge/ge/office/11-student_services.
- Programme and Syllabi
- Interview results

Recommendations:

- N/A

Suggestions for Programme Development

- N/A

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	<input checked="" type="checkbox"/>	<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

Akaki Tsereteli State University (ATSU) has developed Regulations on the Preparation and Defence of the Master's Thesis, regulation that regulates all the details of the preparation and defence of the master thesis. The rule also describes the functions and duties of the thesis supervisor. Each postgraduate student is assigned a qualified supervisor who has scientific-research experience relevant to the study topic. Not more than one year after teaching (before the beginning of the fall semester), the staff of the programme will submit the proposed topic of the master's thesis to the head of the programme. The supervisor has regular consultations with the student the frequency of consultations depends on students needs. During this process student gets advises about research topics, methodology, requirements and specifics of writing a paper and presentation preparation.

The supervisor of the master's thesis (co-supervisor, if necessary) can be an academic staff member of the ATSU - a professor, an associate professor or emeritus. The thesis supervisor can also be a guest lecturer from another university or other institution with relevant competence and expertise. One person can supervise a maximum of 5 graduate students simultaneously.

Before defending the thesis, the students must upload thesis into Moodle system and IT service will check it on plagiarism with special software "Turnitin". The plagiarism is prohibited, and if the coincidence of the text does not exceed 20% student has right to defence thesis, if result it from 20% to 40% student has one more additional semester to correct thesis and if coincidence exceeds 40% student has one more year to rewrite thesis.

Student has right to appeal result within 5 days after the evaluation of thesis.

Data related to the supervision of master's/ doctoral students	
Quantity of master/PhD theses supervisors	21
Number of master's/doctoral students	15
Ratio	7/5

Evidences/Indicators

- Self-evaluation report
- The procedure for completing and evaluating the master's thesis.
- Programme and Syllabi
- Interview results

Recommendations:

- N/A

Suggestions for the programme development

- N/A

Evaluation

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

Compliance with the programme standards

3. Students Achievements, Individual Work with them	Complies with requirements	<input checked="" type="checkbox"/>
	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

After analyzing the documentation provided by the educational institution, it has been concluded that the qualifications of the individuals involved in implementing the programme meets all the necessary requirements and comply with the relevant legislation. The master's programme is being implemented with the participation of a total of 9 professors, out of which 6 are from L'Aquila University, 13 associate professors, and 2 invited staffs. Therefore, the academic staff plays a major role in the implementation of the program. Moreover, it has been ensured that there is a balance between the academic and invited staff.

Number of the staff involved in the programme (including academic, scientific, and invited staff)	Number of Programme Staff	Including the staff with sectoral expertise⁶	Including the staff holding PhD degree in the sectoral direction⁷	Among them, the affiliated staff
Total number of academic staff	24	17	11	16
- Professor	9	9	3	3
- Associate Professor	13	8	8	13
- Assistant-Professor	-	-	-	-
- Assistant	-	-	-	-
Visiting Staff	2	-	-	-
Scientific Staff	9	9	3	16

Several professors' personal files indicate that their works have been published in both national and international refereed scientific journals.

It's worth mentioning that the university has signed an agreement with the University of L'Aquila in Italy. As per the agreement, six professors from the European partner university are involved in executing the program. These foreign professors have a particularly rich scientific research and professional experience. The involvement of these foreign professors in the implementation of the programme will contribute to the comparison between the Georgian and European approaches, as well as the Europeanization of the program. To overcome the language barrier, the programme includes sectoral English as well as English-language training courses, and it is now possible to defend the master's thesis in English. The involvement of these foreign professors in the implementation of the programme will contribute to the comparison between the Georgian and European approaches, as well as the Europeanization of the program. To overcome the language barrier, the programme includes sectoral English as well as English-language training courses, and it is now possible to defend the master's thesis in English.

It should be noted here that the programme is led by a qualified specialist in the field, who has the necessary knowledge and rich experience in the relevant field to develop the program. Based on both the documentation and the interview, it is established that the head of the programme is actively involved in the development of the program. participation in the preparation of the educational programme, preparation of students for scientific conferences, etc.), and other activities (participation in various professional seminars and trainings, internship, etc.). In the process of university authorization and programme accreditation. In addition, the head of the programme performs an administrative function and is involved in programme evaluation and student counseling. His scientific works, which are actively used in the educational process, are also interesting. Thus, the qualifications, experience and performance of organizational functions of the head of the programme fully meet the requirements necessary for the development of the programme, as well as correspond to the learning outcomes provided by the programme.

The university has a dedicated team of administrative and support staff members who work together to ensure the successful implementation of programme goals and student services. The administrative staff is adequately

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

qualified and equipped to handle all aspects of university management, while the support staff in the library, laboratories, and computer centres are committed to providing top-notch assistance to students and faculty alike. The university has a team of administrative and support staff who work separately. Their main goal is to ensure the implementation of programme goals and provide excellent student services. It's important to note that the administrative staff are qualified professionals who are also responsible for managing the library. The university's support staff work in various departments such as laboratories and computer centres. Their roles are defined by relevant regulations and align with the university's educational mission. It's worth noting that administrative and support staff roles are interconnected, and they work collaboratively to refine and improve the educational process. The university has specific rules and regulations in place for occupying academic, administrative, and support positions. Additionally, the university has a workload scheme for academic and scientific staff, which is renewed each semester. This scheme includes teaching and/or scientific research, as well as other workloads, in accordance with the specific functions of the staff members. The workload scheme covers both fall and spring semesters and identifies planned and actual work for the university's academic/scientific, administrative, and support staff. This approach ensures that all staff members have the necessary qualifications and competence to achieve the learning outcomes envisaged by the program.

Evidences/Indicators

- Self-assessment report
- Functions and activities of the programme head
- Personal information (CV) of academic and invited staff
- Job descriptions of administrative and support staff
- Qualification requirements
- "Requirements to the head of the higher education program" (Annex 2-EP-QA1.1).
- The results of interviews with academic and invited staff
- The Results of the interview with the head of the programme
- Loading of academic and invited staff in the programme
- Official instructions of the faculty website: <https://atsu.edu.ge/ge/home>
- The mechanism and methodology of university student contingent planning
- Academic and invited staff functions and contract models
- Faculty structure. Educational and research profile of the faculty. Official instructions of the faculty: [Faculty of Technical Engineering \(atsu.edu.ge\)](https://atsu.edu.ge)
- Functions and duties of the head of the programme;
- Resolution No. 173 of the Representative Council of ATSU. 28.02.2018. On the methodology of determining the number of academic and guest personnel according to the programmes of Akaki Tsereteli State University - (<https://atsu.edu.ge/ge/legal-reference>);
- Resolution of the Academic Council No. 61 (21/22), 6.06.2022: "Norms of the annual educational and scientific methodical workload of academic staff, emeritus, teachers and specialists invited on a contract basis" - (<https://atsu.edu.ge/ge/legal-reference>);
- Individual workloads of academic staff

Recommendations:

- N/A

Suggestions for Programme Development

- N/A

Evaluation

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

Master programme “Construction” includes a 30-credit research component for Master thesis. This ensures the systematization of the theoretical knowledge and practical skills acquired in the course of study, the identification of field-specific knowledge, practical and creative skills. During the defence of the thesis the student must prove that he/she is capable independently to conduct research in his chosen field, presenting the achieved results and presenting his/her reasoning in public, reasonably.

The supervisor of the master's thesis can be the academic staff member of ATSU (professor, associate professor), emeritus professor, or an invited person with a doctoral degree - the head of the department makes a decision on the invitation on the recommendation of the head of the programme, which is reflected in the relevant minutes of the department meeting. The supervisors, topics and reviewers of the master's thesis shall be approved by the Faculty Council. The thesis may have also a co-supervisor (depending on the specifics of the research). One supervisor can supervise maximum of 5 graduate students simultaneously.

Successful implementation of the programme is ensured by highly competent professional academic staff with long teaching experience and with established educational and scientific experience. According to SER from the academic staff of ATSU, the supervisor of “Construction” related theses can be 2 professors and 7 associate professors. The academic staff members who supervise the theses have received their education in the leading accredited universities of Georgia and abroad. They have also published their works in high-ranking scientific journals.

Topics for the theses shall be selected based on the areas of scientific research of the academic staff implementing the programme, in accordance with the current technical problems for the region. During the selection of topics, the interests of the graduate students and partner organizations are also taken into account.

Number of permanent 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	9	9	no
- Professor	2	2	no
- Associate Professor	7	7	no
- Assistant-Professor	no	no	no
Visiting personnel	no	no	-

Scientific Staff	no	no	-
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In spite of high quality academic background of the staff involved as the supervisors active involvement of younger generation representatives is urgently needed. Involvement of younger generation will be needed to assure sustainability of the programme, but also to introduce new present-day topics for the theses. These topics should be related to digitalisation, BIM and Industry 4.0 which ought to become the potential challenges in an academic institution for graduation theses.

Evidences/Indicators

- Self-evaluation report
- Master degree programme
- Data about the academic staff

Recommendations:

- To assure sustainability of the study programme younger generation academic staff has to be urgently involved for supervision to introduce more new generation Industry 4.0 related topics; relevant action plan by the Faculty would be needed.

Suggestions for the programme development

- N/A

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 checked="" 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

University has developed and introduced an evaluation system for academic, administrative and support staff. To evaluate the academic staff and teachers, the evaluation of the educational and scientific-methodical activity determined by the preliminary individual load within the academic year is used. The teaching-methodical work of the academic staff is checked by the dean's office of the faculty, the head of the department, the educational process management service, and by the deputy rector. In the first stage, the

educational and scientific-methodical activity is checked by the head of the department, who registers the annual report of the educational and scientific-methodical activity of each staff member.

The report on the performance of all the academic staff is discussed on the department meetings, as well as by the dean, and is submitted to the Faculty Council for approval. Based on the information provided by the department, at the end of the academic year on the different levels of management the educational process management service of the university reviews and records the academic and scientific-performance of the academic staff. The rector of the university makes the final appropriate decision on the quality of the performed scientific-methodical work, based on the decision of the scientific-disciplinary expert commission. In parallel to administrative evaluation of performance of the academic staff there are student surveys carried out. Feedback of these surveys is provided each semester.

Also collegial mutual attendance of classes has been introduced to give the opinion about the strengths and the areas for improvement.

ATSU uses the following services for professional development of staff:

- o Business trips to trainings and scientific conferences;
- o Trainings and workshops planned by the quality assurance service of ATSU;
- o Paid scientific-creative leave of ATSU;
- o Foreign language courses of the Center for Life-Long Learning;
- o Scientific conference services of the ATSU.

Evidences/Indicators

- o Self-evaluation report
- o Meetings/interviews with academic staff

Recommendations:

- o N/A

Suggestions for the programme development

- o N/A

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	<input checked="" type="checkbox"/>	<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

The master's programme primarily operates in the study halls, library, and computer room at Akaki Tsereteli State University. Additionally, the "Construction and Transport" department's training and production department in the RUL centre, as well as the research laboratories, are utilized for the programme's activities. Upon visual inspection, it was determined that the classrooms are equipped with state-of-the-art technological facilities and are properly furnished. Furthermore, the auditoriums and laboratories feature visual aids that enhance the comprehension of discussed topics. Experts have inspected the scientific and technical library of the faculty, computer centres, laboratories of the faculty, and technological cabinet-laboratories of the university. Their findings indicate that these laboratories are equipped with the necessary materials and technical resources to carry out laboratory work as outlined in the syllabus. The educational and research environment at the university has been updated and improved, with the library fund being equipped with modern technologies and literature, as well as computer classes. The library features a wide range of literature, including textbooks and electronic versions, that is readily available to students. Moreover, the university has signed memoranda that allows students to request papers held at the technical university as needed. The university has also signed memoranda of cooperation with foreign universities in addition to local organizations, which are valuable for both academic staff and students.

Additionally, the library offers electronic versions of high-impact factor journals. As mentioned during the interview, the library fund is regularly updated to ensure that students have access to the latest literature. The methodological material and literature available for the master's programme guarantees the attainment of learning outcomes and aligns with the current advancements in the field. The syllabi of the training courses outlined in the programme encompass the latest Georgian and foreign language works, which are available in the library's fund storage. Additionally, electronic versions of theses are accessible to students. It is worth mentioning that the university has included the integrated library system electronic catalogue (OPAC) service since 2011. The library has access to electronic databases, including: <http://search.epnet.com/> ; <http://journals.cambridge.org/> .

The university endeavours to design the educational process and programme with consideration to the requirements of employers. In an effort to broaden these relationships the university has signed a memorandum of cooperation with industry enterprises in relevant fields, including:

- construction company "Dagi+" LLC;
- construction company "Gzamshen" LLC;
- construction company "Accord" LLC;
- construction company "Kshetilsadenmshen" LLC;
- construction company LLC "Sakmilsadenmsheni";
- construction company LLC "Tobe";
- "Roads Department of Georgia";
- LLC "Karibche";
- LLC "Design Complex",
- LLC "Force",
- LLC "Gate";
- "Design Complex" LLC.

It's important to ensure the continuity of the learning/teaching process, which is why distance, mixed, and hybrid forms of education may be utilized if necessary. The Academy already implemented a pilot programme for this from March 16, 2020, to April 1, 2020. According to the staff, during the spring semester of the 2019-

2020 academic year, they conducted lectures remotely using various online platforms such as Microsoft Teams and Moodle.

During the visit, the experts visually inspected the laboratories necessary for the implementation of the educational programme, namely:

- Laboratory of thermodynamics and heat transfer
- Geodesy Laboratory
- Laboratory of durability of materials and construction mechanics
- Laboratory of construction materials
- Laboratory of hydro-aero mechanics
- Manual electric arc welding laboratory
- Semi-automatic and automatic welding laboratory
- Contact welding laboratory
- Laboratory of road and construction vehicles
- Laboratory of building constructions

Academic staff and representatives of the companies during the interviews noted that if necessary, the students will take advantage of the material resources of the companies. They also mentioned that there was such an experience within the framework of the memorandum.

It is still worth noting that in the self-assessment report, the institution has determined the existence of basic materials and technical means and the means of using the materials and technical base of partner organizations as a strong point. During the interviews, the representatives of the partner companies confirmed that, based on the memorandum, the educational institution can use the material resources, research equipment and tools in their possession. The learning outcomes envisaged by the programme are achievable, however, it is desirable for the institution to periodically update the laboratory facilities with more modern equipment.

For an academic institution the teaching and learning environment together with the relevant facilities for regular recreation should meet all the contemporary national standards for health and safety. The environment for regular working in the university should also be aesthetically outstanding reflecting the quality of academic work there.

Evidences/Indicators

- o Master's degree programme
- o Classroom and laboratory infrastructure in buildings VII, IX of the Akaki Tsereteli State University;
- o Constantly updated scientific library of the university - <https://library.atsu.edu.ge/> ;
- o Memorandums of cooperation with the industry's enterprises
- o Access to international electronic library databases <https://library.atsu.edu.ge/ge/p/scientificbases>
- o Educational auditoriums and laboratory infrastructure (material and technical resources) in buildings VII, IX of the university;
- o Library Regulation (Resolution No. 158; February 28, 2018);
- o Constantly renewing fund of the university library;
- o Access to scientific databases/electronic library databases;
- o Visual inspection;
- o The results of interviews with academic and visiting staff;
- o Results of interviews with students and graduates;
- o Survey results.

Recommendations:

- o N/A

Suggestions for the programme development

- N/A

Evaluation

Component	Complies with requirements	Substantially complies with requirements	Partially complies with requirements	Does not comply with requirements
4.4 Material Resources	<input checked="" 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

The programme budget is calculated by the financial and material resources management service of the university, which includes the necessary expenses for the implementation of the programme components.

The main source of financing of the university is the income received from tuition fees for bachelor's, master's, doctoral and professional educational programmes, the volume of which is increasing every year from 2014 to 2023.

In order to rationally and effectively spend the money during budget planning, in recent years, in accordance with the projects (e.g. budget applications) presented by the faculties, a spending limit has been allocated for them within the general budget. The representative council of the university approves both the document of budgetary priorities and the amount of the spending limit. Presenting and taking into account the priorities of the strategic development plan of ATSU and the strategic development plan of the faculty in the spending part of the budget in the current year is the optimal decision for the effective implementation of the above-mentioned plans under conditions of limited financial resources.

The university, faculty and department authorities should initiate the activities to work out a plan for infrastructure development and upgrading of it with relevant funding to be allocated for these activities. The quality of academic output of the institution is fully dependant on the quality of environment the staff and the students are using regularly.

Evidences/Indicators

- The programme budget;
- Visiting the premises;
- Interview results.

Recommendations:

- The programme is under-financed; civil engineering studies are always expensive and require good funding to create relevant facilities and academic learning environment; SER does not give clear evidence that the study programme leaders have currently relevant resources available. In cooperation

with the construction sector stakeholders/employers/entrepreneurs the University and Faculty authorities should address the issue urgently to assure long term quality of Construction studies in ATSU.

Suggestions for the programme development

- o N/A

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	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Compliance with the programme standard

4. Providing Teaching Resources	Complies with requirements	<input type="checkbox"/>
	Substantially complies with requirements	<input checked="" 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

The principal regulatory document of the main approaches and mechanisms of quality assurance is the "Quality Assurance Concept of Akaki Tsereteli State University", according to which the quality system operating in the institution is based on 3 main policies:

- Quality assurance policy of educational programmes - EP-QA
- Research development policy - RE-QA;
- Management efficiency improvement policy - ME-QA.

In the case of educational programmes, the quality assurance policy (EP-QA) is implemented through 3 procedures:

- Programme initiation, planning and approval procedure (EP-QA 1.1) - defines such issues as initiation of a new programme, development and approval rules, basic requirements, persons responsible for implementation of the procedure, etc. The attachments of the document are - the application form of the educational programme idea, key parameters and resource compliance form, programme curriculum form, syllabus form. The annex to the document is "Instructions for the development of a higher (academic) educational programme" (4-EP-QA 1.1), which regulates the following issues: 1) the structure of the curriculum, 2) the name of the programme and the qualification to be awarded, 3) the volume of the programme with credits, 4) the language of instruction, 5) prerequisite for admission to the programme, 6) analogues of the programme, 7) purpose of the programme, 8) learning outcome, 9) methods of achieving learning outcomes, 10) student knowledge assessment system, 11) study plan, 12) structure of the study course syllabus, 13) human resources etc.
- Programme evaluation procedure (EP-QA 1.2) - describes the activities/measures necessary for programme evaluation, as well as the various indicators and criteria used for evaluation. The received evaluation is used for updating and developing the current programmes, as well as for ensuring their compliance with the requirements;
- Procedure for the development of existing programmes (EP-QA 1.3) – defines the activities necessary to develop an existing programme, methods for their implementation and responsible persons, work to make changes to the programme and approval of these changes.

According to the above documents, internal quality assessment is carried out with the involvement of academic and invited staff, students, graduates and employers, using pre-established assessment mechanisms, tools and procedures for responding to assessment results. The use of these documents in the process of assessment (and self- assessment) ensures the transparency and complexity of the process - all procedures are regulated, the functions of the participants in this process are defined, unified forms created in advance are used, the content of the programme and provision of resources, existing experience, opinions are subject to study and evaluation stakeholders (students and graduates, academic and invited staff, employers), etc. According to the documents indicated above, the institution uses the PDCA principle. However, it should be noted here that the programme was modified in the period 01.2022 - 05.2023. Therefore, due to objective circumstances, it was not possible to fully use this principle at this short stage.

The programme submitted for accreditation is a modified version of an existing programme. The programme modification included several stages, including analysis of recommendations received in 2021, identification of ways to improve the programme, implementation of changes, study of best practices (similar programmes), internal and external evaluation of the modified programme, final review and approval of the programme.

The programme was modified by a working group with the following composition: dean of the faculty, the author of the idea of initiating the programme, the head of the programme (at the same time, the head of the quality assurance service of the faculty), academic staff, students and graduates of the programme, employer. It should be noted here that it is not appropriate for the head of the programme to be at the same time the head of the quality assurance service of the faculty implementing the programme, which determines the compliance

of the programme with the requirements and evaluates the programme. This creates a basis for a conflict of interest and may call into question the objectivity of the internal evaluation of the programme.

During the interview, the head of the programme and the members of the self-evaluation group talked about the above-mentioned procedures and the work done. According to their explanation, during the working process, the recommendations already issued by the Accreditation Council, the content and resources provisioning of the programme (human, material-technical and financial resources) were analyzed. The experts had questions regarding the provision of programme resources - how the resources of the programme were studied and on what basis was the sufficiency of these resources (including financial resources) determined for the implementation and development of the programme. The head of the programme explained that the resources needed for the implementation of the programme were determined based on the existing experience and capabilities. However, he could not clearly explain why, for example, the costs of maintaining, changing and/or updating the material and technical base of the programme, are not considered in the budget. According to the answer, the necessary costs will be covered from the budget of the faculty or from the central budget of the institution or from the financial quota additionally allocated for the faculty.

During the interview, the members of the working group noted that the opinions of the interested parties were studied, similar programmes in Georgia and abroad were studied, and the external evaluation of the programme was carried out, which was confirmed by the materials presented as an attachment to the self-assessment report. The interviewees also mentioned the role of the quality assurance service in this process (consultations, information meetings, etc.). During the interview, the students, graduates and potential employers of the programme talked about the importance and relevance of the programme, noted that the programme meets their expectations and is evaluated positively by them. The academic staff of the programme also noted that their activities are systematically evaluated, they are informed about the results of the evaluation, their opinions and needs are studied, and various measures are taken for professional development (for example, consultations, trainings, information meetings, etc.). According to the representatives of the quality assurance service, the head of the programme and the interviewees, an important aspect of evaluation is the quality of the programme implementation process, teaching methods, used teaching technologies (including e-learning opportunities).

As a result of the study of the presented documents, as well as the interviews conducted within the visit, the following circumstances were highlighted:

- The quality assurance policy in place in the institution provides a complex approach to processes, documentation of processes and the possibility of observing and comparing the results obtained in different periods (confirmed by quality assurance/management regulatory documents valid in the institution). The quality management system, quality assurance procedures and mechanisms in the institution create an opportunity to develop the programme and achieve compliance with the established requirements. At the same time, it is advisable to exclude the possible basis of conflict of interest, namely the situation when the same person creates the programme and himself checks the compliance of this programme with the standards (it is about combining the functions of the head of the programme and the head of the quality assurance service of the faculty implementing the programme).
- The modification of the programme was carried out collegially, with the involvement of the working group and interested parties, following the procedures in force in the institution. (confirmed both by documents and interview results). The programme modification process involved examining important aspects of programme development. However, it was also necessary to take into account the fact that the specific material and technical resources of the programme requires periodic updating (for example, due to wear and tear) and replenishment (for example, in the case of materials needed for laboratory experiments), which is impossible without appropriate financial support. Therefore, it is necessary to carry out a complex evaluation of the programme - study of all important aspects for the sustainability of the programme,

including the preliminary identification of the financial resources required for the maintenance, renewal and development of the programme resources.

As a summary, it should be noted that the documents submitted by the institution, the results of the interview and the above-mentioned circumstances together led to the evaluation of this component of the standard - "Substantially complies with requirements".

Evidences/Indicators

- Concept of Quality Assurance of Akaki Tsereteli State University";
- Educational programme initiation, planning and approval procedure (EP-QA 1.1) and annexes;
- Educational programme evaluation procedure (EP-QA 1.1) and annexes;
- Procedure for developing valid educational programmes (EP-QA 1.3);
- Programme approval by the Academic Council (Resolution #64(22/23), 27.04.2023);
- Minutes of the meeting of the Construction and Transport Department of the Engineering-Technical Faculty #07, 06.03.2023;
- Engineering-Technical Faculty Board Meeting Minutes #22, 16.03.2023;
- Assessment of learning outcomes, 2022;
- External evaluation of the programme;
- Internal evaluation of the programme;
- Faculty Quality Assurance Service Reports, 2020-2021, 2021-2022;
- Faculty Quality Assurance Service Reports, 2022-2023 (additional documentation);
- Rector's orders regarding e-learning (#01-04/21, 13.03.2020; #01-04/25, 03.04.2020; #01-04/28, 24.04.2020; 01-04/106, 16.10.2020 - additional documentation);
- List of material resources;
- Information about the improvement of the material and technical base (additional documentation);
- Evaluation of the programme by graduates;
- Student survey results;
- Analysis of a survey of programme staff;
- Research and comparative analysis of foreign programmes;
- Interview results.

Recommendations:

- It is recommended to carry out a comprehensive evaluation of the programme - the study of all aspects determining the sustainability of the programme, including the preliminary identification of the financial support needed to maintain, renew and develop the resources of the programme.

Suggestions for the programme development

- It is advisable to exclude the possible basis of the conflict of interests. In particular, the combination of the functions of the person responsible for the programme (the head of the programme) and the person responsible for determining compliance with the requirements (the person responsible for quality control) should be excluded

Evaluation

Component	Complies with	Substantially	Partially complies	Does not comply
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	requirements	complies with requirements	with requirements	with requirements
5.1 Internal quality evaluation	<input type="checkbox"/>	<input checked="" 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 regulations in force in the institution, the external evaluation of the programme is the evaluations and recommendations received during the accreditation process. The programme presented by the institution is accredited (see: self-assessment report "Information about the educational programme"). During this external evaluation in 2021, certain recommendations were made. It should be noted here that due to the changes made during the programme modification process (for example, the structure of the programme, the structure of the programme's concentrations), certain recommendations have lost their relevance (for example, recommendations regarding optionality in concentrations).

According to the head of the programme and the working group, the recommendations of the Accreditation Council were implemented by the working group, which in most cases is confirmed. However, there are 2 recommendations that you should pay attention to. Namely, recommendation: "The university should pay more attention to increasing the scientific productivity of professors and teachers, maintaining it, and professional development of the staff" (see dynamics of the amount of activity: 1) Conferences (2021 = 11, 2022 = 9, 2023 = 6); 2) Trainings (2021 = 3, 2022 = 2); 3) Scientific publications (2021 = 10, 2022 = 5, 2023 = 4); 4) Projects obtained by staff (2021 = 1, 2022 = 1)); during interviews with programme staff, it became clear that recommendation remains relevant. Also, the recommendation "The "prerequisites for admission to a academic course" written in the syllabuses must correspond to the entries defined in the curriculum" was not fully implemented (see: Programme Curriculum and syllabus of academic courses. Exceptions: "Technical expertise of construction": 1) in the syllabus - "Wood Constructions", in the curriculum "Wood and Composite Constructions", 2) in the syllabus "Highway design", in the curriculum - "Highway design 1". "Computer modelling in the construction industry ": in the syllabus "Rehabilitation of highways", in the curriculum - "Rehabilitation and modernization of highways").

During the interview, the head of the programme and the working group noted that the recommendations of an independent expert and the opinions of employers were taken into account in the process of modifying the programme - The external evaluation of the programme was carried out by a Georgian specialist not affiliated with the institution (his opinions, recommendations and evaluation of the programme are presented in the form of an official letter). The programme has been positively evaluated by an external expert. Also, the employers positively evaluated the programme and confirmed their high interest in the programme and readiness for further cooperation.

The documents submitted by the institution, the results of the interview and the above-mentioned circumstances together led to the evaluation of this component of the standard as "Substantially complies with requirements".

Evidences/Indicators

- Programme Curriculum (Programme Objectives; Programme Learning Outcomes; Distribution of academic courses according to semesters);

- Syllabuses;
- Documents specified above (among them, information about staff conferences, publications, trainings, projects);
- External evaluation of the programme by independent experts;
- Interview results.

Recommendations:

- It is necessary to implement recommendations received in 2021 that have not yet been implemented or have been partially implemented and at the same time are still relevant.

Suggestions for the programme development

- N/A

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 checked="" 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 rules in force at the institution, the evaluation of the programme is carried out using the evaluation procedures established on the basis of the quality assurance policy. The monitoring and evaluation process of the current educational programme is regulated by the procedure for the development of the current educational programmes, which is used both for the evaluation of the programmes and for the updating and development of the current programmes. The same document defines the stages of the procedure and the deadlines for their completion. Various evaluation mechanisms are used (for example, survey results of students, graduates, programme staff, employers; programme evaluation using direct and indirect methods, etc.).

When evaluating this component of the standard, the following circumstances were taken into account - The programme submitted for accreditation was modified in 2022. Thus, due to objective circumstances during this period, it was impossible to fully use all the mechanisms (for example, the PDCA principle) provided for by the regulatory documents of the institution. Also it was impossible to periodically evaluate the programme with the involvement of the relevant stakeholders and use the evaluation results to systematically improve the programme, hence the gradual development of mechanisms for monitoring the quality of the programme could not take place.

Below are the mechanisms that were used by the institution:

- The opinions of stakeholders (students, alumni, employers, programme staff) were explored. Although in some cases questionnaire forms were presented rather than research results, the involvement and awareness of stakeholders is confirmed by the results of the interviews. However, it should be noted here that at this stage it was possible to conduct certain surveys using the questionnaires available in the institution (for example, survey of employers, assessment of master's thesis supervisor);
- The quality assurance service studied the educational process, the level of student awareness, student performance and the results of various surveys. The assessment results are reflected in the "Report of the Quality Assurance Service of the Faculty of Engineering and Technology" (2020-2021, 2021-2022);
- An external evaluation of the programme was carried out by an independent expert;
- Similar programmes of Georgian and foreign universities were studied.

The use of the above-mentioned and other mechanisms operating in the institution is confirmed in a number of cases - by the documents presented by the institution, and in some cases - by the results of the interview: the head of the programme, the academic staff of the programme, students and graduates noted the systematicity of the evaluations and confirmed participation in the evaluations (surveys) and being informed about the results. The head of the quality assurance service noted that an important part of the evaluation process is the evaluation of the achievement of programme results (direct and indirect methods of programme evaluation are used). During the interview, the representatives of the quality assurance service spoke about the use of the PDCA principle, the requirements of the quality management system operating in the institution, their implementation, performance control, planning and implementation of improvement activities. According to the explanation of the programme head, besides evaluating the programme, the mechanism for improving the programme is studying the experience of Georgian and foreign universities (studying similar programmes). This is especially important, since the programme includes an elective concentration in English-language, which students can study as part of an exchange programme at a partner university (on the basis of an agreement with the University of L'Aquila, Italy).

The documents submitted by the institution, the results of the interview and the above-mentioned circumstances together led to the evaluation of this component of the standard as "Complies with requirements".

Evidences/Indicators

- "Concept of Quality Assurance of Akaki Tsereteli State University";
- Educational programme initiation, planning and approval procedure (EP-QA 1.1) and annexes;
- Educational programme evaluation procedure (EP-QA 1.1) and annexes;
- Procedure for developing valid educational programmes (EP-QA 1.3);
- Programme approval by the Academic Council (Resolution #64(22/23), 27.04.2023);
- Minutes of the meeting of the Construction and Transport Department of the Engineering-Technical Faculty #07, 06.03.2023;
- Engineering-Technical Faculty Board Meeting Minutes #22, 16.03.2023;
- Objectives and Learning Outcomes Map (Programme Annex);
- Curriculum Map (Programme Annex);
- Programme learning outcomes assessment scheme;
- Assessment of learning outcomes, 2022;
- External evaluation of the programme;
- Internal evaluation of the programme;
- Faculty Quality Assurance Service Reports, 2020-2021, 2021-2022;
- Faculty Quality Assurance Service Reports, 2022-2023 (additional documentation);

- Evaluation of the programme by graduates;
- Student survey results;
- Analysis of a survey of programme staff;
- Survey questionnaires;
- Research and comparative analysis of foreign programmes;
- Cooperation Agreements (with the University of L'Aquila, Italy);
- Interview results.

Recommendations:

- N/A

Suggestions for the programme development

- N/A

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	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Compliance with the programme standards

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

Attached documentation (if applicable): N/A

Name of the Higher Education Institution: LEPL Akaki Tsereteli State University

Name of Higher Education Programme, Level: Construction, Master's degree

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	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Teaching Methodology and Organisation, Adequacy Evaluation of Programme Mastering	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Student Achievements, Individual Work with them	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Providing Teaching Resources	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Teaching Quality Enhancement Opportunities	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Signatures:

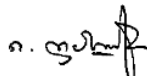
Chair of Accreditation Expert Panel

Full name, signature Roode Liias



Accreditation Expert Panel Members

Full name, signature Irma Garibashvili



Full name, signature Tamar Gvianishvili



Full name, signature Davit Tepnadze

