



განათლების ხარისხის განვითარების ეროვნული ცენტრი
NATIONAL CENTER FOR EDUCATIONAL QUALITY ENHANCEMENT

Higher Education Institution Authorisation Experts' Report Template LEPL - Georgian Technical University

Expert Panel Members

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Tbilisi

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Authorisation Report Resume

General information on the educational institution

The Georgian Technical University (GTU) is located in the capital city of Tbilisi. It was founded in 1922 as the polytechnic faculty of the Tbilisi State University. It transformed in 1928 into an independent "Georgian Polytechnic Institute" and later achieved University status in 1990. Currently, GTU consists of 15 institutes for scientific research, 13 main educational units, faculty and central libraries, computer centres, examination centres, expert laboratories, scientific-research and expert laboratories, etc. GTU employs 4092 personnel (1184 academic staff, 380 scientific staff, and 2071 administrative and support staff), and offers 167 educational programmes (73 Bachelor, 57 Master and 36 Doctoral and 1 Georgian language preparation educational programme) in Georgian, English, and Russian. There are 17992 active students (15038 Bachelor, 1969 Master, and 703 Doctoral). GTU total budget is 67,519,511.00 GEL; the budget allocated to research and scientific activities is 11,263,091.00GEL, and the budget allocated for library services is 427,342.00 GEL.

Brief overview of the evaluation process for authorisation: SER and Site visit

The GTU quality assurance team prepared the Self Evaluation Report, which was submitted to the NCEQE and later delivered to the panel of experts. The Self-evaluation process should become more open, transparent, inclusive and analytical.

The site visit started on the morning of 01.07.2024. The expert panel was accompanied in the site visit by the NCEQE representatives. The panel initially met GTU's leadership team, followed by visits in GTU's sites. The visit continued with full day meetings with interviews of the panel with GTU leadership, management, and staff on 02.07.2024, 03.07.2024, 04.7.2024 and 05.07.2024. In the last day of the visit, the panel discussed the findings and agreed on their assessment of the extent of compliance of GTU with the authorization standards and their components. The chair of the panel delivered a brief overview of the panel findings to GTU leadership.

Overview of the HEI's compliance with standards

GTU has been found to be fully compliant with 3 components (2.3, 3.1, 3.3); substantially compliant with 14 components (1.1, 1.2, 2.1, 2.2, 3.2, 4.1, 4.2, 5.1, 5.2, 6.1, 6.2, 7.2, 7.3, 7.4); and partially compliant with 2 components (6.3, 7.1). There were no components with which GTU was found non-compliant.

Summary of Recommendations

- The Institution must clearly define the strategic focus of GTU's operations with respect to the four pillars defined in the mission document. (Standard 1.1)
- It is recommended that the mission statement must be linked with objectives so that they can be monitored and measured. (Standard 1.1)
- It is recommended that the Institution must assure the engagement of all stakeholders in the mission development process. (Standard 1.1)
- It is recommended to define qualitative metrics for the 7 Strategic Directions and link them with priorities. (Standard 1.2)
- It is recommended to provide a mapping from the 7 Strategic Directions to organisational units. (Standard 1.2)
- It is recommended to adopt Equality, Diversity and Inclusion in the Strategic Objectives. (Standard 1.2)
- It is recommended to monitor and assess all organization units at top level.(Standard 1.2)
- GTU has a large number of Faculties (there is also large number of Departments in few Faculties) and research institutes. It is recommended to optimize the number of Faculties and research institutes. It is recommended to optimize the number of Faculties and research institutes and rename the Faculties accordingly (Standard 2.1)
- It is recommended to structure the role of research centres and their interaction with Academic Departments. (Standard 2.1)
- It is recommended that the University must conduct a comprehensive analysis integrating data from all faculties to gain valuable insights into overall academic performance and trends, thereby identifying common strengths and areas for improvement. (Standard 2.2)
- It is recommended to establish a more systematic annual schedule for conducting and reviewing studies among students, graduates, invited, academic, and administrative personnel, and independent research centers as well as resources (e.g. library). The results of these studies must be systematically analyzed and compared year-over-year to track progress and identify trends. This regular assessment will ensure continuous improvement and alignment with the university's goals and standards. (Standard 2.2)
- To ensure a more flexible and user-friendly experience, it is recommended that the completion of students' questionnaires for some students must not be obligatory. This would encourage voluntary and genuine feedback from all students without restricting their access to other important academic information. (Standard 2.2)
- It is recommended to enhance communication skills in a foreign language for doctoral and master's programs. (Standard 3.2)
- It is recommended to strengthen the English proficiency test in the entrance exam, or conduct interviews, or introduce a thesis writing component as requirements. (Standard 3.2)
- It is recommended that the institution develops and implements an individual evaluation mechanism for administrative and support staff.(Standard 4.1)
- It is recommended to set target benchmarks not only at faculty/school level but also at university level for all benchmarks required by the self-evaluation report template. (Standard 4.1)
- University must consider the optimization of the number of administrative/support staff and improve the ratio of administrative/support staff to the number of academic, scientific, and

- invited staff. (Standard 4.1)
- It is recommended that the Institution must make the personnel management policy and related documents easily accessible through the Institution's official website.. (Standard 4.1).
- It is recommended that the University must develop regulatory documents that define the methodology of determining the number of academic, scientific, and invited staff in relation with academic programs. Such documents must be easily accessible on university web-site. (Standard 4.2).
- It is recommended that GTU ensures international students are sufficiently informed about student self-government and have the opportunity to exercise their right to elect or be elected as self-government members. (Standard 5.1)
- It is recommended to formalize processes related to scholarships and develop a public accessible standard that ensures equal opportunities for both Georgian and international students. (Standard 5.2)
- The University must employ a strategy to reduce the number of students suspended. (Standard 5.2).
- It is recommended to provide mentoring support and training to the PhD supervisors. (Standard 6.1)
- It is recommended to revisit the English exam to assess the level of the PhD students. (Standard 6.1)
- It is recommended to establish multi-disciplinary research activities through the collaboration among different Faculties and Research Centres. (Standard 6.1)
- It is recommended to increase substantially the number of publications and contributions in high-quality journals (Impact Factor larger than one, Q1 or Q2 according to scimago journal classification). (Standard 6.1)
- It is recommended that all the works performed by the doctoral students (not only the completed dissertation) must be checked for plagiarism (journal manuscripts, colloquiums, thematic seminars), which will help to develop their skills; (Standard 6.1)
- It is recommended to clarify the prerequisites for the defense of a PhD thesis, including the requirement of having a scientific article published in a journal indexed by the Web of Science or Scopus databases, or, for those in the humanities and social sciences, in the ERIH Plus database. (Standard 6.1)
- It is recommended to improve the procedure for appointing a supervisor for a doctoral student. The appointed professor must have conducted relevant scientific activities related to the thesis topic in the last three years, with publications in journals indexed by the Web of Science or Scopus databases, or, for those in the humanities and social sciences, in the ERIH Plus database. (Standard 6.1)
- The University must develop an effective strategy and incentive system for research support towards internationalization. (Standard 6.2)
- The University must use metrics such as citation counts, FWCI, i10 to benchmark academic staff and researchers' performance. (Standard 6.3)
- It is recommended that the evaluation analysis of the research quality efficiency must be used by the GTU to plan a new research strategy for further development. (Standard 6.3)
- GTU must prepare a detailed refurbishment plan (maximum three years) for the all of the institution's buildings and related infrastructure (laboratories, sanitary nodes; fire-fighting

equipment; environment adapted for people with special needs; catering facilities) and determine the estimated budget. (Standard 7.1)

- The University must provide escape plans for each building with designed signs. (Standard 7.1)
- The University must allocate a Fire Warden in each building. (Standard 7.1)
- The University must introduce a training process for both academic staff and students in health and safety procedures. (Standard 7.1)
- The Institution must subscribe to IEEE Xplore (Standard 7.2)
- The Library must provide rooms for group-based projects (Standard 7.2)
- It is recommended to adopt two-way factor authentication. (Standard 7.3)
- It is recommended to replace PCs with outdated cyber-risk Operating System. (Standard 7.3)
- It is recommended to install anti-malware software. (Standard 7.3)
- To prepare a strategic/action plan for finding financial resources as determined by the corresponding budget for the rehabilitation/renovation plan of buildings, relevant infrastructure, and laboratories, it is recommended to revise the financial plan and use KPIs to assess the effectiveness. (Standard 7.4)

Summary of Suggestions

- It is suggested that the international vision must use similar practices that are followed by European Academic Institutions in countries such as Germany, Netherlands, Italy, France, Finland, Sweden. (Standard 1.1)
- It is suggested to align priorities with UN SDG goals and local markets needs on skills and competences (Standard 1.2)
- It is suggested to provide a mapping of Industry 4.0 to national priorities and adjust it to teaching and learning (Standard 1.2)
- It is suggested that the University's English documents must avoid using the term 'foreign' and opt for 'international' instead, as it conveys a more inclusive and globally-minded approach. (Standard 2.1)
- It is suggested that the name 'International Design School' must be revised to 'Faculty of International Design' or a similar title to align with the naming conventions of other faculties, ensuring consistency, clarity, and adherence to the university's organizational structure and statute guidelines. (Standard 2.1)
- It is suggested to enhance inclusivity and diversity in decision-making processes, it is suggested that opportunities are given to international students to participate in the management issues of the faculty and representative councils. (Standard 2.2)
- It is suggested that the University must develop and implement policies to uphold academic integrity. These policies should address the use of AI in academic work, ensuring that both students and faculty understand the ethical implications and standards required to maintain the integrity and originality of their contributions. (Standard 2.3)
- It is suggested that when choosing among foreign languages such as English, French, German, Russian, etc., preference should be given to English where possible and desirable. (Standard 3.2)
- It is suggested that the GTU must set-up a digital platform that could systematically manage the assessment of learning outcomes. (Standard 3.3)

- It is suggested that the workload model (number of teaching hours, administrative responsibilities) for academic staff must be adjusted by taking into account number of PhD students supervised and number of research projects managed. (Standard 4.2)
- It is suggested that the institution ensures students are well-informed about their rights to elect or be elected as representatives in the Senate and Faculty Council, as well as about the role and functions of student members within these councils. (Standard 5.1)
- It is suggested that the institution ensures students are thoroughly informed about both the Commission of Ethics and the Code of Ethics. (Standard 5.1)
- It is suggested that GTU considers further financial support mechanisms (such as dividing tuition fees into more than four instalments) to decrease the rate of students with suspended status due to financial issues. (Standard 5.2)
- It is suggested to improve the collaboration of Doctoral Service with research institutes. (Standard 6.1)
- It is suggested to frequently conduct anonymous surveys with doctoral students in order to identify their problems and to plan appropriate measures. (Standard 6.1)
- It is suggested to revise the scholarship fees for the PhD students. (Standard 6.1)
- In order to ensure international recognition, it is suggested that at least 80% of the scientific and academic staff must be involved in international scientific activities. (Standard 6.2)
- It is suggested that the University should promote research outcomes. (Standard 6.2)
- It is suggested to set-up google scholar profiles for both academic staff and PhD students (Standard 6.2)
- It is suggested that Term of Reference (e.g. research strategy, vision and priorities) is defined for each research centre. (Standard 6.3)
- It is suggested to use either Scopus (<https://www.scopus.com/search>) or Scimago (<https://www.scimagojr.com/>) to evaluate the quality of the research outcomes in international journals. (Standard 6.3)
- It is suggested to specify the area of ownership and use of the institution according to the documents from the public register. (Standard 7.1)
- It is suggested to specify the area leased out by the institution according to the documents from the public register. (Standard 7.1)
- It is suggested to prepare a single document about the teaching areas according to the structures' measurement drawings. (Standard 7.1)
- It is suggested to prepare a brief description of the laboratories, specify the average weekly load of each laboratory based on data from the previous three years (including the number of students), and assess the growth potential of its use. (Standard 7.1)
- It is suggested to use ergonomic chairs in the buildings. (Standard 7.1)
- Some of the lab facilities (e.g. Metallurgy tunnel) are too expensive to maintain. It is suggested to replace them with software tools (7.4)

See Appendix 1 for information on sharing/not sharing an argumentative position

Summary of the Best Practices

- Embed innovation in teaching and learning
- Engage with external stakeholders to gain additional income

- Adopt best practices at International (European) level
- ISO 900:1 on reporting from organisational units
- ABET Accreditation
- The University currently has one ABET-accredited English-language program, Biomedical Engineering, and an additional 8 programs are in the process of preparing for ABET accreditation.
- To enhance the development of educational programs (construction and civil engineering, transport, mining and geoenengineering, aviation engineering, business organization, etc.), the University has implemented a mechanism to ensure the integration of practical components, utilizing opportunities from both international projects and local businesses (RMG, LYON TRANS, TEGETA MOTORS, 31-ST AVIATION FACTORY, HEIDELBERGCEMENT, Anagi etc.).

Summary Table of Compliance of HEI with Standards and Standard Components

	Standard	Complies with Requirements	Substantially complies with requirements	Partially Complies with Requirements	Does not Comply with Requirements
1.	Mission and strategic development of HEI	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
1.1	Mission of HEI	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
1.2	Strategic development	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
2.	Organisational structure and management of HEI	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
2.1	Organisational structure and management	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
2.2	Internal quality assurance mechanisms	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
2.3	Observing principles of ethics and integrity	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	Educational Programmes	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.1	Design and development of educational programmes	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.2	Structure and content of educational programmes	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
3.3	Assessment of learning outcomes	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Staff of the HEI	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>

4.1	Staff management	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
4.2	Academic/Scientific and invited Staff workload	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
5	Students and their support services	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
5.1	The Rule for obtaining and changing student status, the recognition of education, and student rights	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
5.2	Student support services	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
6	Research, development and/or other creative work	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
6.1	Research activities	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
6.2	Research support and internationalization	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
6.3	Evaluation of research activities	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
7	Material, information and financial resources	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
7.1	Material resources	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>
7.2	Library resources	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
7.3	Information resources	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
7.4	Financial resources	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>

Signature of expert panel members

1. Anastasios, Dagiuklas (Chair).



2. Ekaterine Pipia (Member)



3. Anzor Beridze (Member).



4. Gaioz Partskhaladze (Member).



5. Nino Mindiashvili (Member)



6. Ia Natsvlishvili (Member)



7. Mariam Gorgodze (Member)



Compliance of the Applicant HEI with the Authorisation Standard Components

1. Mission and strategic development of HEI

Mission statement of a HEI defines its role and place within higher education area and broader society. Strategic development plan of HEI corresponds with the mission of an institution, is based on the goals of the institution and describe means for achieving these goals.

1.1 Mission of HEI
Mission Statement of the HEI corresponds to Georgia's and European higher education goals, defines its role and place within higher education area and society, both locally and internationally.
<p>Descriptive summary and analysis of compliance with the standard component requirements</p> <p>In the self-assessment report submitted by the Institution, it is mentioned that the mission of Georgian Technical University (GTU) clearly emphasizes its position at both the local and international levels. It examines the role of higher education in preparing students to be active members of a democratic society, producing and sharing knowledge, encouraging students' personal development, and assuring competitiveness in the labour market. The self-evaluation report outlines the evaluation criteria for the authorization standard. The Institution's self-assessment report must include a justification for its performance. The mission, vision, and values of the university are presented individually in the self-evaluation, without any justification for these aspects.</p> <p>The GTU has a vision aiming to accomplish the following pillars: internationalization of the teaching and research process; autonomy; academic freedom; unification of learning, teaching and research; equality and transparency. Such vision has been described in the self-evaluation report and is also available on the vision document. However, there is a lack of methodology and roadmap on how this vision will be implemented and which metrics are used to measure the success within these four pillars.</p> <p>Limited information is provided regarding the local demand needs and the strategy of Georgia in key technological areas, skills and expertise that the graduate will obtain from different Programmes offered by GTU. Limited information has been also provided regarding the strategy towards internationalization. There is no information regarding the Unique Selling Point of the offered Programmes.</p> <p>There is no information provided in the SER about the involvement of stakeholders in the mission development process. Although the Experts asked further clarifications about this during the visit, there was no clear answer provided.</p>
<p>Evidences/indicators</p> <ul style="list-style-type: none"> • Vision document; • Self Evaluation report; • Interviews with the executive team;
Recommendations:

<ul style="list-style-type: none"> • The Institution must clearly define the strategic focus of GTU's operations with respect to the four pillars defined in the mission document. (Standard 1.1) • It is recommended that the mission statement must be linked with objectives so that they can be monitored and measured. (Standard 1.1) • It is recommended that the Institution must assure the engagement of all stakeholders in the mission development process. (Standard 1.1)
Suggestions: <ul style="list-style-type: none"> • It is suggested that the international vision must use similar practices that are followed by European Academic Institutions in countries such as Germany, Netherlands, Italy, France, Finland, Sweden. (Standard 1.1)
Best Practices (if applicable): N/A
Evaluation <ul style="list-style-type: none"> <input type="checkbox"/> Complies with requirements X Substantially complies with requirements <input type="checkbox"/> Partially complies with requirements <input type="checkbox"/> Does not comply with requirements
1.2 Strategic Development
<ul style="list-style-type: none"> ○ HEI has a strategic development (7-year) and an action plans (3-year) in place. ○ HEI contributes to the development of the society, shares with the society the knowledge gathered in the institution, and facilitates lifelong learning ○ HEI evaluates implementation of strategic and action plans, and duly acts on evaluation results.

Descriptive summary and analysis of compliance with the standard component requirements

GTU has already provided a strategic development period plan for the period 2022-2028. This strategy plan has taken into consideration the country's strategic decision to become a full-fledged member of the European Union as well a representative of the democratic space. This strategy is based on freedom and dignity principles.

The GTU development period plan states two mainly priorities:

- Research-based teaching and learning, allocating the appropriate resources based on resources and opportunities and creation of a balanced management structure by the Rector Office.
- Culture of communication focused on mutual cooperation and consent that in turn promotes interdisciplinarity/multidisciplinary and transdisciplinary.

However, the two priorities are very generic and are not aligned with specific strategic areas of competence and skills in teaching, learning and research. Additionally, the two priorities do not provide enough details (or links) regarding national priorities in Georgia and how these priorities are linked with the international practice in HEI. Limited information has been provided regarding the balanced structure that has been stated in the internal evaluation and mission statement reports. It is not clear how balance has been considered in the GTU's structure. The role of UN SDG goals, which is quite important for shaping HEI strategy, has not been considered.

The SER states that both interim and annual reports present the implementation of the action plan of GTU and how its structure is implemented on an annual basis. However, there is no detailed information about this implementation and there are no KPIs to assess and evaluate the action plan. According to the SER, GTU's three-year strategic action plan and the structural units' have been modified; new directions have been defined. There is no information about the structural changes and the rationale behind them. There are key questions regarding the restructuring and the establishment of new department.

The strategic plan includes SWOT analysis and discusses how the strategy has been affected.

The following strengths have been identified:

- University awareness

- Diversity of educational programs;
- Master and PhD academic programmes
- Good library resources
- Established laboratory facilities;
- Good employment rates on graduates;
- Participation in national and international research programmes
- High social responsibility

The following weaknesses have been provided in the SER:

- Outdated infrastructure (It is not clear whether it either refers to building or equipment or both)
- Insufficient intensity of university-research activity (e.g. fundamental research, applied research). Such weakness is not evident in section 6.

Additionally, the following threats have been determined:

- Threats caused by pandemics, natural disasters, hostilities;

The strategic development plan does not provide insights, how these obstacles will be managed and whether they have an impact on the strategy (risk assessment). The SWOT analysis takes into consideration internal parameters. The SWOT analysis has not included any external parameters. Additionally, both competition with other public and private Universities in Tbilisi and external parameters have not been considered.

There are seven different strategies that have been defined in the SER:

- Strategic Direction 1 – Organizational Development. It focusses
- Strategic Direction 2 – Quality Management
- Strategic Direction 3 – Learning and Teaching
- Strategic Direction 4 – Research and Innovation
- Strategic Direction 5 – Internationalization
- Strategic Direction 6 – Student Life
- Strategic Direction 7 – Social Responsibility

Different goals have been defined for each strategic direction and different sub-targets have been determined. Each goal is supported by qualitative metrics; there are no concrete quantitative metrics that can monitor the goals' progress on annual basis. There is enough and concrete information regarding sub-targets for each strategic direction. Through these Directions, it has been highlighted the vision to provide skills and competences towards Industry 4.0. According to the report, a project-team administration form of management approach has been followed. It is not clear whether teaching and learning has been adapted to meet Industry 4.0.

Through the interview of the Experts with key stakeholders, it was found that executive management and staff have been involved in strategic planning. Staff and management are mostly aware of the actions assigned to their organizational units. It seems that each organizational unit is aligned with

strategic directions. ISO 900:1 has been introduced on GTU's structural units on annual basis through the interim reports. It is not clear (SER Does not provide details) how organisation unit strategy is monitored and assessed at top level. The Experts have found through the visit, that it is not clear how strategic directions are cascaded across different organisational units. There is a lack of systematic approach, how this can be accomplished.

The University is expected to invest on innovation aiming to generate additional income and embed innovation on teaching and learning its collaboration with key stakeholders of the GTU. However, there are no Key Performance Indicators defined about this target (e.g. the expected size of this income in each year).

There are certain statements that are not supported by evidence: (e.g. "Traditional universities are becoming competitive market players". "Sustainability on teaching and learning, sharing of the best European practices", etc).

Although freedom and quality has been defined as a vision pillar, the SER does not provide how Equality, Diversity and Inclusion has been considered in a top-down approach across all organisation units. Limited information is provided regarding the gender balance on the students and academic staff recruited. Additionally, the vast majority of academic staff are GTU graduates.

Evidences/indicators

- Strategic development plan;
- Self-Evaluation Report;
- Regulation of Faculties;
- Mission and objectives;
- Interviews with key stakeholders;

Recommendations:

- It is recommended to define qualitative metrics for the 7 Strategic Directions and link them with priorities.
- It is recommended to provide a mapping from the 7 Strategic Directions to organisational units.
- It is recommended to adopt Equality, Diversity and Inclusion in the Strategic Objectives.
- It is recommended to monitor and assess all organization units at top level.

Suggestions:

- It is suggested to align priorities with UN SDG goals and local markets needs on skills and competences
- It is suggested to provide a mapping of Industry 4.0 to national priorities and adjust it to teaching and learning;

Best Practices (if applicable):

- Embed innovation in teaching and learning
- Engage with external stakeholders to gain additional income
- Adopt best practices at International (European) level
- ISO 900:1 on reporting from organisational units

Evaluation

- ☐ Complies with requirements
- X Substantially complies with requirements
- ☐ Partially complies with requirements
- ☐ Does not comply with requirements

2. Organisational Structure and Management of HEI

Organisational structure and management of the HEI is based on best practices of the educational sector, meaning effective use of management and quality assurance mechanisms in the process. This approach ensures implementation of strategic plan, integration of quality assurance function into management process, and promotes principles of integrity and ethics

2.1 Organisational Structure and Management

- Organisational structure of HEI ensures implementation of goals and activities described in its strategic plan
- Procedures for election/appointment of the management bodies of HEI are transparent, equitable, and in line with legislation
- HEI's Leadership/Management body ensures effective management of the activities of the institution
- Considering the mission and goals of HEI, leadership of the HEI supports international cooperation of the institution and the process of internationalisation.

Descriptive summary and analysis of compliance with the standard component requirements

GTU structure comprises the Rector's office, the Head of the administration's office, the Chancellery, the secretariats of the Academic Council and the representative council, the main educational units, independent research departments, the university library, etc. Thirteen faculties have been defined: Faculty of Civil Engineering; Faculty of Power Engineering; Faculty of Mining and Geology; Faculty of Chemical Technology and Metallurgy; Faculty of Transportation and Mechanical Engineering; Faculty of Architecture, Urban Planning and Design; Faculty of Informatics and Control Systems; Faculty of Business Technology; Faculty of Law and International Relations; Faculty of Engineering Economic, Media Technology, and Social Sciences; Faculty of Agricultural Science and Biosystems Engineering; Faculty of Sustainable Mountain Development and International Design School. This is a rather large number of Faculties, contradicting the statement of an efficient management in the strategy and vision document.

The nomenclature of the educational units at the University must be standardized to align with the University's statute. Currently, the inclusion of 'International Design School' as a faculty name is inconsistent with the definition provided in the statute, which states that 'The Faculty is the main educational unit of the University, which ensures training of students in one or more specialties and provides them with appropriate qualifications.' To resolve this discrepancy, it is recommended that the name 'International Design School' must be revised to be named either 'Faculty of International Design' or a similar title that conforms to the naming conventions of other Faculties. This change will ensure consistency and clarity in the University's organizational structure, upholding the statute's guidelines and maintaining a coherent identity for all educational units. The title of the Faculty entitled "Engineering economics, media technology and social science" is not very clear. Its title and mission must be revised to reflect the mission, role and activities within the Departments.

There is a large number of Departments in each Faculty. There are overlapping activities in Departments in few of the Faculties (E.g. Informatics, Agricultural Sciences and Biosystems Engineering, Business Technologies). It is not clear the role of each Department and their relationship with the Programmes due to Departments with overlapping activities (e.g. Telecommunication Engineering vs Radio Engineering and Broadcasting, Computational Mathematics vs Artificial Intelligence, Electrical Energy Engineering and Electromechanics vs Electrical Engineering and Electronics, Mechanical Engineering

and Technology vs Industrial Engineering and Technology, Transport and Industrial Management vs Railway Transport, Accounting, Analysis and Audit vs Financial and Banking Technologies). There are no Academic Departments established in the Faculty of Mountain Sustainable Development. There is a need to minimise the number of Departments in each Faculty to follow the European practice, where few overlapping programmes can be offered by a single Department (e.g. Electrical Engineering, Mechanical/Industrial Engineering, Computer Engineering). The title of the Faculty "Faculty of engineering economics, media technology and social sciences" is not linked with the activities and the Department titles.

The operational guidelines of the academic and other structural units within the University are governed by regulations that are approved in accordance with the procedures outlined in GTU's charter.

The University's regulation, developed by the Academic Council and approved by the Senate, outlines the rules for conducting elections for its management bodies, faculty, and independent research units. This regulation includes detailed procedures for election and appointment processes, as well as the evaluation of candidates' visions and action plans. The election procedures at GTU are designed to be transparent, fair, and compliant with legal standards.

Limited information is provided about the research centres. Their mission and strategy are not clear as well as the links with the Faculties, Departments and Programmes. The SER has mentioned 15 different research centres. This is a large number by taking into account research activities. Limited information is provided about the researchers affiliated with each research centres.

GTU has deployed an "eFlow" electronic case management program, which is used by management bodies, governing bodies, and structural units for communicating the issues. Unified Rule of Management establishes standardized principles and norms for documenting management activities and handling documents, an orderly workflow, information retrieval, and document compilation and formatting. The University has developed the Methodological Guide for Risk Management and the Business Process Continuity Plan.

GTU has provided the internationalization Policy document, which encompasses encouraging student and staff involvement in international exchange programs, initiating joint educational and research projects, fostering relationships with leading global educational and research institutions, establishing new partnerships, and enhancing strategies to attract International students and academic staff.

During the interview, accreditation of educational programs, specifically, international accreditation (ABET), was named as one of the success indicators of the efficiency of internal quality mechanisms at the university.

Evidences/indicators <ul style="list-style-type: none"> • Website; • Interview Results; • GTU's charter; • Regulations of Units; • Holding of Elections of the Management Bodies (Governing Entities); • Unified Rule of Management; • Methodological Guide for Risk Management; • Business Process Continuity Plan; • Internationalization Policy.
Recommendations: <ul style="list-style-type: none"> • GTU has a large number of Faculties (there is also large number of Departments in few Faculties) and research institutes. It is recommended to optimize the number of Faculties and research institutes and rename the Faculties accordingly. • It is recommended to structure the role of research centres and their interaction with Academic Departments.
Suggestions: <ul style="list-style-type: none"> • It is suggested that the University's English documents must avoid using the term 'foreign' and opt for 'international' instead, as it conveys a more inclusive and globally-minded approach. • It is suggested that the name 'International Design School' must be revised to 'Faculty of International Design' or a similar title to align with the naming conventions of other faculties, ensuring consistency, clarity, and adherence to the university's organizational structure and statute guidelines.
Best Practices (if applicable): N/A
Evaluation <ul style="list-style-type: none"> <input type="checkbox"/> Complies with requirements X Substantially complies with requirements <input type="checkbox"/> Partially complies with requirements <input type="checkbox"/> Does not comply with requirements
2.2 Internal Quality Assurance Mechanisms
<ul style="list-style-type: none"> ○ Institution effectively implements internal quality assurance mechanisms. Leadership of the institution constantly works to strengthen quality assurance function and promotes establishment of quality culture in the institution.

- HEI has a mechanism for planning student body, which will give each student an opportunity to get a high quality education.

Descriptive summary and analysis of compliance with the standard component requirements

The Quality Assurance structure at GTU suggests a hierarchical organization with the Head of the Service, two Deputy Heads supporting the Head, and three departments: the quality control, analysis, and development department, the Accreditation and Authorization department, and the Department of Professional Programs.

Each Faculty has appointed a quality assurance manager, supporting the faculty's active participation in implementing the internal quality assurance mechanism at their level. Each Faculty has a mission aiming to evaluate educational processes, develop recommendations tailored to the specific needs and challenges of each faculty, and discuss them with the university's quality assurance service. The provided documents and the interviews proved the assessment of educational processes at the faculty level.

The mechanism for monitoring student academic performance involves overseeing the organization of the educational process, monitoring the examination process, analyzing students' academic achievements, and reviewing the results of student surveys at the faculty levels. However, there hasn't been an analysis of this information across different Faculties at the university level and this issue was not clarified during the interview. Consequently, a holistic view that integrates data from all faculties is lacking. Such an analysis could provide valuable insights into the overall academic performance and trends, highlighting common strengths and areas for improvement that might be missed when looking at individual faculties alone. It is recommended that the University conduct a comprehensive analysis integrating data from all faculties to gain valuable insights into overall academic performance and trends, thereby identifying common strengths and areas for improvement. Notably, the University has provided the results of the studies conducted at the university level among invited, academic and administrative personnel, but only for the 2023-2024 academic year. To maintain consistency and regularity in the feedback process, the University is recommended to establish a more systematic annual schedule for conducting and reviewing studies among students, graduates, invited, academic, and administrative personnel, and independent research centers as well as resources. The results of these studies must be systematically analyzed and compared year-over-year to track progress and identify trends. This regular assessment will ensure continuous improvement and alignment with the university's goals and standards.

The involvement of the structural units in implementing internal quality mechanisms was proved during the interview. The recommendations provided by the Quality Assurance Office are discussed at the rectorate, academic and representative councils. Some evidence has been provided. Although students are represented on the faculty and representative councils, international students are not involved actively in the selection process. To enhance inclusivity and diversity in decision-making processes, it could be suggested that international students be given opportunities to participate in the management issues of the faculty and representative councils. This inclusion would ensure that the unique perspectives and needs of international students are considered and addressed, fostering a more comprehensive and representative governance structure.

The Quality Assurance Office utilizes the electronic database (www.vici.gtu.ge) to engage stakeholders within the university. While the SER report and interview with quality assurance reveal that students' participation in the surveys is voluntary, it has been identified through interviews with several student groups that completing the questionnaires is mandatory, as the system does not allow the students to navigate to other pages or view their exam grades. A different response was obtained from one

international student noting that he could skip the questionnaire. To ensure a more flexible and user-friendly experience, it is recommended that the completion of students' questionnaires for some students (should not be obligatory (the answer was not affirmative from all the students.)). This would encourage voluntary and genuine feedback from all students without restricting their access to other important academic information. Student interviews revealed that their evaluations are limited to evaluating the program, courses, and lecturers. Student opinions varied on the inclusion of administration and infrastructure questions in a general satisfaction survey, with some students noting their presence and others indicating their absence. This variation in student responses could be attributed to the mandatory nature of completing the questionnaire, which may lead students to rush through the questions in an attempt to finish quickly. This hurried approach might result in them overlooking certain sections or not fully engaging with all aspects of the survey.

There is a methodology for planning the student contingent at the University. The indicators for this student body planning methodology include the number of announced competition positions, the number of registered entrants, the number of enrolled students, the number of suspended students, the number of students with terminated status, the number of students with restored status, the number of students enrolled without passing unified national exams/general master exams, the number of students transferred through mobility (including internal mobility), the number of students transferred in via mobility (including internal mobility), labor market requirements, the number of employed (including qualified) graduates, and the number of students enrolled without passing the unified national exams/general master's exams. The interviews with the deans and program heads confirmed the practical application of the methodology.

Evidences/indicators

- Self-evaluation Report;
- Website;
- Quality Assurance Reports from the Faculties;
- Composition of Faculty Commissions for Evaluation of Educational Programs;
- Academic, Administrative and Support Staff Satisfaction Survey Results 2023-2024;
- Program Planning and Elaboration;
- QA Report-2022;
- Formation and Mobility of the Contingent of Students;
- Learning Process Management Instruction;
- Interview Results

Recommendations:

- It is recommended that the University must conduct a comprehensive analysis integrating data from all faculties to gain valuable insights into overall academic performance and trends, thereby identifying common strengths and areas for improvement.
- It is recommended to establish a more systematic annual schedule for conducting and reviewing studies among students, graduates, invited, academic, and administrative personnel, and independent research centers as well as resources (e.g. library). The results of these studies must be systematically analyzed and compared year-over-year to track progress and identify trends. This regular assessment will ensure continuous improvement and alignment with the university's goals and standards.
- To ensure a more flexible and user-friendly experience, it is recommended that the completion of students' questionnaires for some students must not be obligatory. This would encourage voluntary and genuine feedback from all students without restricting their access to other important academic information.

Suggestions:

- It is suggested to enhance inclusivity and diversity in decision-making processes, it is suggested that opportunities are given to international students to participate in the management issues of the faculty and representative councils.

Best Practices (if applicable): <ul style="list-style-type: none"> • ABET Accreditation
Evaluation <ul style="list-style-type: none"> <input type="checkbox"/> Complies with requirements X Substantially complies with requirements <input type="checkbox"/> Partially complies with requirements <input type="checkbox"/> Does not comply with requirements
2.3. Observing Principles of Ethics and Integrity <ul style="list-style-type: none"> ○ HEI has developed regulations and mechanisms that follow principles of ethics and integrity. Such regulations are publicly accessible. ○ Institution has implemented mechanisms for detecting plagiarism and its prevention. ○ HEI follows the principles of academic freedom.
<p>Descriptive summary and analysis of compliance with the standard component requirements</p> <p>GTU has established a code of ethics and disciplinary liability norms for both students and staff. The university has implemented a "rule for checking the presence of scientific plagiarism," which outlines the regulations and mechanisms for identifying and addressing instances of plagiarism. The code of ethics is available in the Georgian and English versions on the website. Since March 23, 2018, the university has been utilizing the software Strikeplagiarism to uphold academic integrity. During the interviews, it was revealed that there are some workshops and trainings for the academic staff regarding academic integrity. In light of the rise of AI, it is suggested that the University must develop and implement policies to uphold academic integrity. These policies should address the responsible use of AI in academic work, ensuring that both students and faculty understand the ethical implications and standards required to maintain the integrity and originality of their contributions.</p> <p>The code of ethics promotes academic freedom for both faculty and students in teaching and research. By endorsing these freedoms, the code supports an environment where educators can explore diverse teaching methods and innovative research topics, while students are encouraged to engage critically and creatively with their studies, fostering a culture of intellectual growth and discovery. The interview results also revealed that both academic staff and students uphold and value the principles of academic freedom. This shared commitment to academic freedom fosters an environment where faculty and students can pursue research.</p>
<p>Evidences/indicators</p> <ul style="list-style-type: none"> • Self Evaluation Report; • Code of Ethics; • Rule for Using Strikeplagiarism Program; • Internal Regulation; • Rule for Checking the Presence of Scientific Plagiarism; • Website; • Interview Results.
<p>Recommendations:</p> <ul style="list-style-type: none"> • AI is a new trend and it is recommended to follow advances at the universities in Europe and USA or UK regarding AI policy. (Standard 2.3) • It is recommended that both BSc/BA and MSc/MA dissertations are checked for plagiarism. (Standard 2.3)
<p>Suggestions:</p> <ul style="list-style-type: none"> • It is suggested that the University must develop and implement policies to uphold academic integrity. These policies should address the use of AI in academic work, ensuring that both students and faculty understand the ethical implications and standards required to maintain the integrity and originality of their contributions.

Best Practices (if applicable):

N/A

Evaluation

- ☒ X Complies with requirements
- ☐ Substantially complies with requirements
- ☐ Partially complies with requirements
- ☐ Does not comply with requirements

3. Educational Programmes

HEI has procedures for planning, designing, approving, developing and annulling educational programmes. Programme learning outcomes are clearly defined and are in line with the National Qualifications Framework. A programme ensures achievement of its objectives and intended learning outcomes

3.1 Design and Development of Educational Programmes

HEI has a policy for planning, designing, implementing and developing educational programmes.

Descriptive summary and analysis of compliance with the standard component requirement

GTU implements educational programs at all three levels of higher education, which correspond to the university's mission, goals, and vision. Currently, the University has 167 educational programs, including 73 bachelor's, 57 master's, and 36 doctoral programs. Georgian Technical University has 13 faculties that implement 167 educational programs at the bachelor, master, and doctoral levels and one Georgian language program. The higher education institution has "Rules for planning, developing, evaluating and developing an educational programme at Georgian Technical University", which describes the structure of the curriculum, semester plan, program, methodology for the development of the individual curriculum, and the procedure for the operation of mechanisms for the renewal of educational programs. The rule also includes mechanisms for the direct and indirect assessment of educational programs. The institution employs both quantitative and qualitative labor market research methodologies in the initial implementation and subsequent execution of educational programs. The University has implemented an electronic system for managing the educational process: vici.gtu.ge for students, and viciadmin.gtu.ge for faculty and administrative staff. The electronic system contains databases of students and university staff, as well as information about educational programs, research components, and other educational resources. Through this system, students have the opportunity to pass academic registration from the system and receive various information related to the educational process. Professors and administration have the opportunity to participate in managing the learning process. Students are surveyed and analyzed using this system. The university currently has one ABET-accredited English-language program, Biomedical Engineering, and an additional 8 programs are in the process of preparing for ABET accreditation. Georgian Technical University collaborates with European partner universities to implement diploma programs. In accordance with current legislation, the university has developed regulations and procedures for making changes to or canceling educational programs. To enhance the development of educational programs (construction and civil engineering, transport, mining and geoenvironmental engineering, aviation engineering, business organization, etc.), the University has implemented a mechanism to ensure the integration of practical components, utilizing opportunities from both international projects and local businesses (RMG, LYON TRANS, TEGETA MOTORS, 31-ST AVIATION FACTORY, HEIDELBERGCEMENT, etc.). In accordance with Georgia legislation, the University has mechanisms for program development taking into account cluster

approaches. The University may begin considering these cluster approaches. For instance, employers should evaluate not only bachelor's programs but also master's and doctoral programs simultaneously. At Georgian Technical University, the "Rules for Planning, Development, and Evaluation of Educational Programs" have been developed. According to these rules, GTU oversees the approval, amendment, and cancellation of programs. When deciding whether to plan, develop, implement, or cancel programs, the University considers labor market requirements, feedback from graduates and employers, the results of student and graduate surveys, monitoring of students' academic performance, consultations with professional associations (if applicable), and best practices both locally and internationally.

Evidences/indicators <ul style="list-style-type: none"> • Self-evaluation report • Educational programmes and syllabuses • Rules for planning, developing, evaluating and developing an educational programme • Interviews results
Recommendations: N/A
Suggestions:
Best Practices (if applicable): <ul style="list-style-type: none"> • The University currently has one ABET-accredited English-language program, Biomedical Engineering, and an additional 8 programs are in the process of preparing for ABET accreditation. • To enhance the development of educational programs (construction and civil engineering, transport, mining and geoengineering, aviation engineering, business organization, etc.), the University has implemented a mechanism to ensure the integration of practical components, utilizing opportunities from both international projects and local businesses (RMG, LYON TRANS, TEGETA MOTORS, 31-ST AVIATION FACTORY, HEIDELBERGCEMENT, Anagi etc.).
Evaluation <p><input checked="" type="checkbox"/> Complies with requirements</p> <p><input type="checkbox"/> Substantially complies with requirements</p> <p><input type="checkbox"/> Partially complies with requirements</p> <p><input type="checkbox"/> Does not comply with requirements</p>
3.2 Structure and Content of Educational Programmes
<p>Programme learning outcomes are clearly stated and are in line with higher education level and qualification to be granted.</p> <p>With the help of individualized education programmes, HEI takes into consideration various requirements, needs and academic readiness of students, and ensures their unhindered involvement into the educational process.</p>
Descriptive summary and analysis of compliance with the standard component requirements <p>When developing the program, the University considers the basic principles of the European Credit Transfer System (ECTS), as well as the legislation of Georgia and the University's regulations. The learning outcomes of the programs are formulated to correspond with the qualifications awarded at the higher education level. The learning outcomes of a specific field are based on the descriptions of the detailed field and are developed in accordance with the qualification's framework. The structure and content of the program ensure the logical connection of its components and take into account the features and requirements of each component. Planned learning outcomes and student workload are based on the principle that a student with average academic achievements should achieve the results determined by the program within a reasonable timeframe, which is verified by analyzing the student's academic performance. The volume of components in the programs is determined with regard to their content, learning outcomes, and field specificity. Teaching and learning methods consider the specific characteristics of the field to ensure the achievement of the program's learning outcomes within a specified time frame. In the academic years 2018-2023, the Master's and Doctoral educational programs were modified. This modification affected the prerequisites for admission, in particular, it became mandatory to present a certificate confirming knowledge of a foreign language at the B2 level or to pass an entrance exam. During the interview, some interviewees demonstrated relatively weaker communication skills in the foreign language. Due to their low language skills, they will face difficulties in publishing in international journals (Scopus, Web of Science, Erih Plus, ect). To overcome these</p>

difficulties, it is recommended to strengthen the English test in the entrance exam, or conduct an interview, or write a thesis. When choosing among foreign languages such as English, French, German, Russian, etc., preference should be given to English where possible and desirable. In its programs, the University offers students elective courses, compulsory elective courses, elective courses from the major field, and free components. Regarding their chosen courses, students receive consultation at the faculty's dean's offices and academic departments. The teaching-learning methods described in various programs consider the field characteristics and ensure the achievement of the program's learning outcomes. In order to align it with the National Qualifications Framework and the classification, some programs have been given modern and beneficial names along with the qualifications: (1) The 'Telecommunications' program has been renamed to 'Digital Telecommunication Technologies'. (2) The program 'Mechanical Engineering, Mechanical Engineering and Manufacturing Processes' has been renamed to 'Mechanical Engineering and Technology'. (3) The program 'Business Organisation and Management' was renamed to 'Organisation and Management of Entrepreneurial Business'. Depending on the educational system, each student has an individual study plan. The institution provides access to information about programs. The catalog of educational programs serves the purpose of informing interested persons about the educational activities of the institution. The catalog is updated in accordance with changes in the program. It is available to all interested parties and is published on the institution's web page. As can be seen from the conducted interviews and the presented materials, personalized education programs offer students appropriate formats and conditions of teaching-learning and assessment to students with different requirements, special educational needs, and different academic readiness as well as opportunities for an adapted environment and appropriate human resources, if required. GTU has great experience in engineering education and it also offers programs in social sciences, humanities, and other fields. In its mission and strategic development plan, the University does not prioritize only engineering programs but has also included other areas.

Evidences/indicators <ul style="list-style-type: none"> • Self-evaluation report; • Educational programmes and syllabuses; • Rules for planning, developing, evaluating and developing an educational programme; • Interview results.
Recommendations: <ul style="list-style-type: none"> • It is recommended to enhance communication skills in a foreign language for both doctoral and master's programs. • It is recommended to strengthen the English proficiency test in the entrance exam, or conduct interviews, or introduce a thesis writing component as requirements.
Suggestions: <ul style="list-style-type: none"> • It is suggested that when choosing among foreign languages such as English, French, German, Russian, etc., preference should be given to English where possible and desirable.
Best Practices (if applicable):
Evaluation <ul style="list-style-type: none"> <input type="checkbox"/> Complies with requirements X Substantially complies with requirements <input type="checkbox"/> Partially complies with requirements <input type="checkbox"/> Does not comply with requirements

3.3 Assessment of Learning Outcomes

HEI has law-compliant, transparent and fair system of learning outcomes assessment, which promotes the improvement of students' academic performance.

Descriptive summary and analysis of compliance with the standard component requirements

The learning outcomes of educational programs at the university correspond to the program objectives, are measurable, realistically achievable, and comply with the order of the Minister of Education, Science, Culture and Sports of Georgia № 69/N of April 10, 2019 and order №739908 on approving the list of programs. The program learning outcomes are designed with the involvement of professors, guest lecturers, industry experts, employers, and students, that correspond with industry-specific and current labor market requirements. The appropriate forms, components, and methods determine how students achieve the learning outcomes of the educational programs. To achieve the learning outcomes of the educational program, specific learning courses have been created. Course outcomes are detailed in the syllabus of the courses, and an appropriate assessment method is selected for each outcome. The assessment system is multi-component, consisting of intermediate and final forms of assessment. Minimum competency thresholds are established for midterm and final assessments. When assessing learning outcomes, such learning methods are used as: written exam; oral exam; control questioning test; essay; abstract; practical work; laboratory work; Project, etc. In the evaluation system, rubrics are written for each component and the gradation of points according to the rubrics is given. Knowledge testing at the university is carried out in different ways: written exam, verbal exam, presentation of a project with practical or laboratory work, etc. Most exams are taken at the examination center. Students are informed about the evaluation system used in the institution and related regulations. Information related to the assessment of the components defined by the program is presented on the university website (www.gtu.ge) and in the documents defined by the internal regulations of the university: (a) - Specifically, educational components (Student Outcomes, Course Learning Outcomes) are evaluated in educational programs, syllabi, and the "Learning Process Management Instruction" of the university; (b)- Scientific research components are evaluated according to the rules for evaluating the scientific research component of master's and doctoral educational programs. The University has the "Rules for Performing and Evaluating Student Practices at Georgian Technical University," which regulates the elaboration and assessment process of outcomes acquired during practical training. The University has adopted the "Rule of Undergraduate Research Project/Thesis". According to these rules, the learning outcomes developed during the student's qualification work are assessed for their alignment with the program's learning outcomes. Appropriate criteria are used for this assessment. The university has adopted the "Rule of Evaluation of the Scientific-Research Component of the Master's Educational Programme," which assesses the scientific-research component of the master's educational program. This rule also assists students in effectively planning their time, evaluating resources, and so on. The university has received a document assessing "Educational and Research Components of Doctoral Educational Programmes and the Rules for Their Evaluation". This document includes the evaluation of teaching and research components, as well as the assessment of skill development in effective time planning, rational use of academic resources, and optimization of academic and research activities. The University has implemented an electronic system for assessing students' outcomes. To further develop this platform, it would be suggested to add new features, such as the ability to assess students on the same outcomes as those from previous years in the same cohort. The University has an effective assessment appeal system, regulated by the "Instructions for the Management of the Learning Process at Georgian Technical University". The assessment appeal system defines the grading system

and the university's grading standards. This system uses transparent criteria to assess student learning outcomes and provides students with information about their achieved goals, exam results, gaps, and ways to improve. Students are informed about the institution's assessment system and related regulations.

Evidences/indicators

- Self-evaluation report;
- Educational programmes and syllabuses;

<ul style="list-style-type: none"> • Learning outcomes documentation; • Surveys, analysis, monitoring; • Student survey; • Student attendance monitoring; • Learning process management instruction; • Rules for planning, developing, evaluating and developing an educational programme; • Interview results.
Recommendations: N/A
Suggestions: <ul style="list-style-type: none"> • It is suggested that the GTU must set-up a digital platform that could systematically manage the assessment of learning outcomes.
Best Practices (if applicable): N/A
Evaluation <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Complies with requirements <input type="checkbox"/> Substantially complies with requirements <input type="checkbox"/> Partially complies with requirements <input type="checkbox"/> Does not comply with requirements

4. Staff of the HEI

HEI ensures that the staff employed in the institution (academic, scientific, invited, administrative, support) are highly qualified, so that they are able to effectively manage educational, scientific and administrative processes and achieve the goals defined by the strategic plan of the institution. On its hand, the institution constantly provides its staff with professional development opportunities and improved work conditions.

4.1. Staff Management

- HEI has staff management policy and procedures that ensure the implementation of educational process and other activities defined in its strategic plan.
- HEI ensures the employment of qualified academic/scientific/invited/administrative/ support staff.

Descriptive summary and analysis of compliance with the standard component requirements

The GTU has in place the staff management policy that corresponds to the mission of the University, the strategic development plan and it serves as a means of their implementation. The GTU has a personnel recruitment procedure approved by the authorized management body/bodies, which includes a transparent and objective procedure that ensures the recruitment and employment of qualified staff for the academic, scientific, and administrative and support staff positions. The University has developed and approved the Rules for affiliation of the academic staff. Each person holding an academic position determines his/her affiliation only with the GTU, participates in the community development and knowledge sharing processes on behalf of the GTU. Affiliation agreement is signed between the GTU and a person holding an academic position at the University which defines the rights and duties of the parties in matters related to the affiliation. Affiliated academic personnel carries out basic educational, research/scientific activities at the GTU, and the research outcomes are regarded as GTU findings. Affiliated academic personnel is actively involved in the decision-making processes regarding educational, research and other key issues at the GTU. The principles of participation of the academic and scientific staff in the decision-making processes related to education, research and other important issues are described in the University charter.

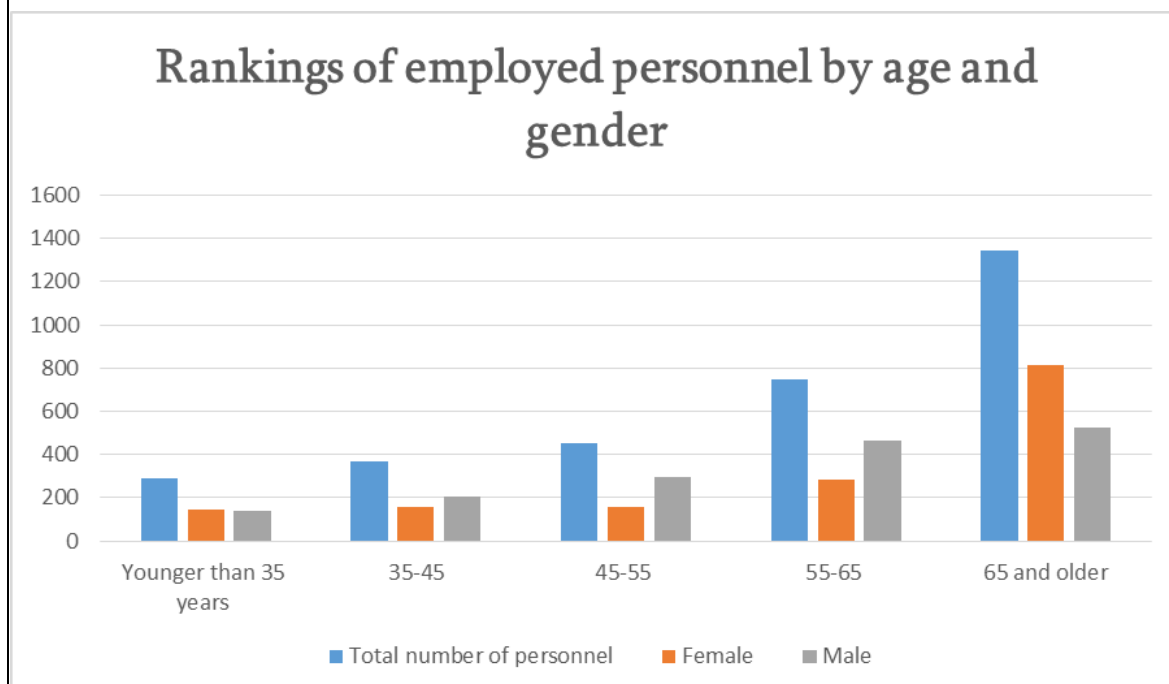
The University has defined and implemented the following mechanisms: mechanism/rules of academic and teaching staff trainings; rules for awarding extra salary (bonuses) to academic, invited professors and teaching staff; rule for funding personnel business trip; rules for employing academic personnel; academic personnel affiliation rule; strategy for employment and retention of young people in academic and scientific positions; general qualification requirements for supporting personnel, rules for hiring administrative/support personnel.

The University has introduced a system of professional development for its employees. The University offers professional development and training programs for its employees (for example training at a professional development center, offering internal University/Faculty scholarships, internal University/Faculty grants for research projects, etc.).

The department of human capital management provides various types of statistical data and information regarding its employed staff (for example, staff distribution according to gender, age, etc.). During the reporting period, the salary of the academic staff increased by 25%, and the salary of the administrative staff by 100/130%. The average age of academic staff was reduced by 6 years.

The human resources of Georgian Technical University consists of academic, scientific, teaching, invited, administrative and support staff. Besides this, several prominent professors of partner universities from all over the global world hold the status of honorary Doctor of the University and they closely cooperate with GTU.

Information about distribution of personnel by gender and age is given in a self-evaluation report submitted by the GTU: Number of academic staff - 1186, including male - 648, female - 538; Number of scientific personnel - 330, including male - 177, female - 153. This distribution is shown on the following diagram:



As shown on the diagram, the percentage of personnel above 65 years is the largest compared to other age groups. The average age of the personnel at GTU is slightly increasing: according the data given at SER, the average age of scientific personnel in 2021 was -61 years, in 2022-62 years and in 2023-63 years. The average age of academic personnel in 2021 was -56 years, in 2022-57 years and in 2023-58 years.

According to the staffing project for 2023 presented by the University, the number of total staffing unit (personal) is 2044 person with monthly total salary 2483218,25 Georgian Lari (among them 957 persons are academic staff, 762 persons are administrative and support staff of faculties/schools, 325 persons are administrative and support staff of the university/central administration).

According the SER submitted by the University in 2024, the quantitative data with regard to personnel are the following: The total number of the staff (including academic, scientific, invited, administrative, support staff) – 4092; Total number of academic staff -1184 (all academic staff are affiliated personnel); Total number of scientific staff – 380; The number of international academic/scientific/invited staff involved in teaching-8; The number of international academic/scientific/invited staff involved in research- 1; Invited staff involved in teaching - 448,

Administrative and support staff- 2071. The total number of academic, scientific, invited staff – 2012. Retention rate for academic staff - 98%; Retention rate for invited staff -100%; Retention rate for administration and support staff -97%. It must be noted that the number of administrative and support staff is greater than the total number of academic and scientific, invited staff (ratio 2071/2012). The University must consider the optimization of the number of administrative/support staff and improve the ratio of administrative/support staff to the number of academic, scientific, and invited staff.

In order to manage the University's activities, the Georgian Technical University has defined certain benchmarks for their staff by 2027. As an example, the ratio of the academic, scientific, invited staff number to the number of students - factual benchmark is 2012/17992 (1/8.9), target benchmark is 2012/23000 (1/11.43). It must be noted that in some cases, benchmarks at University level are not defined for 2027 and only factual benchmarks are presented, for example, ratio of the academic and scientific staff number to the number of invited staff : the factual benchmark is 1564/448 and target benchmark is not defined for 2027. It is desirable to set target benchmarks not only at faculty/school level but also at University level for all factual benchmarks required by the self-evaluation report template.

During the interviews, it was revealed that the staff have been informed about the basic principles of the personnel management policy. They received the information at the time of signing the contracts. However, it must be noted that the personnel management policy and related documents are not easily accessible through the Institution's website. The Institution must make the personnel management policy and related documents easily accessible through the institution's official website.

The University conducts periodic evaluation of academic, scientific, visiting and administrative/support staff. Individual evaluation of academic and inviting staff's teaching and academic service activity is done through students' semester surveys. Evaluation of the scientific activity of academic and scientific personnel is carried out by preparing annual reports on scientific activity at the level of the department, faculty, research institute. Faculties and relevant departments of the institution, as well as research institutes prepare annual reports on scientific work. In the form of self-assessment report of the scientific activity of the faculties/research institute, two criteria are given at the bottom of the form, where the research productivity of the scientific/academic staff is evaluated by referring to individual surnames and names. These criteria are: scientific productivity index of researchers based on the citation index, Scientometric data of scientific works - scientific data indexed in the Web of Science, Scopus, Google Scholar and other databases.

During the interviews, it was noted that at the end of the year, the academic staff fills out the "Academic Staff Questionnaire on fulfilling of hiring competition obligations", which is handed over to the Head of the department. The Expert group requested samples of the above mentioned questionnaire as additional documentation. Also, a similar questionnaire was requested for scientific personnel. However, they could not be found in the additional documentation provided by the institution.

The performance of administrative and support staff is evaluated indirectly, namely by analyzing the results of service satisfaction questionnaires, also, in the process of monitoring the implementation of strategic and action plans. It is recommended that the institution must develop and implement an individual evaluation mechanism for administrative and support staff.

The University uses staff evaluation results in the process of staff management to grant financial prizes in kind rewards to staff for their outstanding achievements. This was confirmed during the interviews as

well as by presenting samples of the rector's order on financial rewards for academic personnel/administrative and support staff.

GTU has in place defined qualification requirements for academic, scientific and invited personnel as well as for administrative and support staff. These requirements are defined in relevant documents of job descriptions and functions. GTU hires the personnel according the defined hiring rules and Staffs' qualifications are in line with GTU qualification requirements.

Evidences/indicators

- Georgian Technical University Staff Management Policy
- University Charter
- Administrative regulations
- Instructions of staff positions
- Faculty regulations
- Job description of academic personnel
- Contract samples
- Rule of academic and teaching staff trainings
- Rules for extra salary (bonuses) to academic, invited professors and teaching staff
- Rules for employing academic personnel
- Rules for hiring supporting personnel
- Rules for funding personnel business trip
- Academic personnel affiliation rule
- Strategy for employment and retention of young people in academic and scientific positions
- General qualification requirements for supporting personnel
- List of trainings provided by the University
- The rule of evaluation of the scientific-research activity of the scientific-research unit of GTU, <https://gtu.ge/pdf/dadgenilebebi/2023/153-2.pdf>
- Rules for submitting, reviewing and evaluating project proposals for grant nominations (grant funded by the university budget); https://gtu.ge/pdf/sauniversiteto_grantis_regulaciebi%20.pdf
- Reports of scientific works conducted in 2023 (Parts I and II) <https://gtu.ge/Research/report-2023.php>
- Form of self-assessment of the scientific-research activity of the faculty/independent scientific-research unit of the Georgian Technical University
- Staffing schedule
- Academic Staff Satisfaction Survey Report for 2023-2024
- Administrative and Support Staff Satisfaction Survey Report for 2023-2024
- Reports of semester survey of students by faculties (Fall semester of 2023-2024)
- Quality Assurance service Office Report 2022
- Semi-annual reports on the implementation of the action plan of the structural units
- Annual reports on the implementation of the action plan of the structural units
- Recommendations by the Head of University Quality Assurance Office with regard to authorization process, 19/10/2023
- Institutional Assessment Analysis Document 2018-2021
- Evaluations of Research component by faculties
- Workload tables for academic/invited personnel for 2023-2024 academic year
- Rector's order on financial rewards for academic personnel/administrative and support staff
- Personal Interview results
- Self-evaluation report submitted by the University.

Recommendations:

- It is recommended that the institution develops and implements an individual evaluation mechanism for administrative and support staff.
- It is recommended to set target benchmarks not only at faculty/school level but also at university level for all benchmarks required by the self-evaluation report template.
- University must consider the optimization of the number of administrative/support staff and improve the ratio of administrative/support staff to the number of academic, scientific, and invited staff.

- | |
|---|
| <ul style="list-style-type: none">• It is recommended that the Institution must make the personnel management policy and related documents easily accessible through the Institution's official website. (Standard 4.1) |
| <p>Suggestions:
N/A</p> |

Best Practices (if applicable):**Evaluation**

- ☐ Complies with requirements
- X Substantially complies with requirements
- ☐ Partially complies with requirements
- ☐ Does not comply with requirements

4.2. Academic/Scientific and Invited Staff Workload

Number and workload of academic/scientific and invited staff is adequate to HEI's educational programmes and scientific-research activities, and also other functions assigned to them

Descriptive summary and analysis of compliance with the standard component requirements

At the beginning of each semester the University develops renewable workload schemes for academic and invited staff, which includes teaching, scientific research, and other workloads based on their tasks and obligations of specific personnel. In 2021, a new academic staff workload scheme was developed at the university. Depending on the specifics of the academic position, the workload scheme includes three components: a) teaching-pedagogical; b) Advisory obligation and supervising the internships introduced by the educational programs; c) scientific research activity. By the decision of GTU representative council (Senate) No. 01-06-02/25 dated June 23, 2021, the personnel list, remuneration, terms and workload limits for academic staff in the university's faculties was authorized.

The workload plans for academic and invited staff include research activities (supervision of master's and doctorate students) and/or teaching (lecture, seminar, practical, laboratory, course work/project, etc.). The workload schemes of academic/scientific and invited staff is also included in the annex of their working agreement with the university. For example, the annex of the contract of professor requires 8-10 hours a week, or 240 to 300 hours annually as a teaching workload/educational and pedagogical activities (lecture, practical, seminar, laboratory, course work, and course project, consulting duties and supervision of internships etc.).

The academic staff of GTU will not work more than 1100 hours in all other universities where they hold an academic position/have teaching workload. This requirement is provided in the academic load distribution form, which includes a column labelled "Weekly load at another university." A person holding an administrative, scientific, or support staff position in any structural unit of the University is not allowed to hold a full time academic, senior teacher, teacher, or professional teacher position.

The University has in place the academic staff affiliation rule, according to which academic staff sign affiliation contracts only with GTU. As an exception, the Academic Council of GTU may allow an individual academic staff member to sign an affiliation contract with another higher education institution. It is worthy to note that all academic staff are affiliated with the University.

To ensure the program's long-term sustainability, the GTU takes into consideration the current and projected student contingent, educational programs specific characteristics, and best international practices for educational programs when planning and determining the amount of academic, scientific, and invited personnel. This is proved by the fact that the ratio of the academic, scientific, invited staff number to the number of students - factual benchmark is 1/8.9, target benchmark for 2027 is 1/11,43.

The total number of academic staff is 1184. All of them are affiliated and they serve 167 educational programs (156 of them are accredited educational programs).The SER describes the experience of the

university in detail how the number of academic/scientific/invited staff is determined per program (the same procedure was described and proved during the meeting with Heads of programs/Heads of departments/ Deans and academic staff): first of all, the competition for the main number of academic staff is held simultaneously. Before the competition, for the existing educational programs related study courses are grouped in so-called "Groups of Subjects". For each group of subjects, the annual academic load (in hours) is set according to the current and forecast contingent of students. The Academic Council and the Representative Council (Senate) determine the amount of the annual workload of the academic and invited staff from the aforementioned workload. The required number of professors, associate professors, assistant professors, assistants and, if necessary, invited professors for a specific subject group will be determined based on the number obtained by dividing the mentioned "group of subjects" annual workload by the workload of the academic staff, based on the characteristics of the subject group and relevant programs. It is not clear whether this workload is adjusted each year by taking account the number of students suspended per Programme.

It must be noted that during the visit, the Experts requested a document/rule/methodology of determining the number of academic, scientific, and invited staff in relation with academic programs (or web-links where we can access it). The Experts could not find the above-mentioned methodology document in the set of additional documents submitted by the University. It is recommended that the GTU must develop regulatory documents that define the methodology of determining the number of academic, scientific, and invited staff in relation with academic programs. Such documents must be easily accessible on the University's website.

During the interview with the representatives of the management of the Institution, it was noted that the institution focused on quality improvement while developing the target KPI. Currently, the University has 18,000 students and it is planning to increase this number to 23,000 by 2027. There are currently 5 educational programs submitted for ABET accreditation. Also, one of their orientations will be the development of dual degree and joint programs and the development of infrastructure. It will be easier to do all this after the development of a new funding model in 2025.

During the interviews with the representatives of the quality assurance service office, the reasons why such target benchmarks are selected for staff were highlighted. These reasons are taking into consideration the following factors: a) multifunctionality of the institution; b) resources of the institution (not only human resources); c) micro-economics of the institution - income and expenses of the institution.

Evidences/indicators

- Georgian Technical University Staff Management Policy
- University Chart
- Benchmarks set by the HEI:
 - · Academic, scientific, and invited staff- program ratio
 - · academic, scientific, and invited staff - students ratio
 - · Academic and scientific staff-invited staff ratio
 - · Affiliate academic staff-entire academic and invited staff ratio
 - · Affiliate academic staff-students ratio
- Administrative regulations
- Instructions of staff positions
- Faculty regulations
- Job description of academic personnel
- Contract samples
- Rules for employing academic personnel
- Rules for hiring supporting personnel

<ul style="list-style-type: none"> • Academic personnel affiliation rule • General qualification requirements for supporting personnel • Staffing schedule • Workload tables for academic/invited personnel for 2023-2024 academic year • personal Interview results • Self-evaluation report submitted by the university.
Recommendations: <ul style="list-style-type: none"> • It is recommended that the University must develop regulatory documents that define the methodology of determining the number of academic, scientific, and invited staff in relation with academic programs. Such documents must be easily accessible on university web-site.
Suggestions: <ul style="list-style-type: none"> • It is suggested that the workload model (number of teaching hours, administrative responsibilities) for academic staff must be adjusted by taking into account number of PhD students supervised and number of research projects managed.
Best Practices (if applicable):
Evaluation <ul style="list-style-type: none"> <input type="checkbox"/> 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

5. Students and Their Support Services

HEI ensures the development of student-centred environment, offers appropriate services, including career support mechanisms; it also ensures maximum awareness of students, implements diverse activities and promotes student involvement in these activities. HEI utilizes student survey results to improve student support services

5.1. The Rule for Obtaining and Changing Student Status, the Recognition of Education, and Student Rights
<ul style="list-style-type: none"> ○ For each of the educational levels, HEI has developed regulations for assignment, suspension and termination of student status, mobility, qualification granting, issuing educational documents as well as recognition of education received during the learning period. ○ HEI ensures the protection of student rights and lawful interests.
Descriptive summary and analysis of compliance with the standard component requirements <p>GTU has developed regulations for assignment, suspension, and termination of student status, mobility, qualification granting, issuing educational documents, and recognition of education received during the learning period for each educational level. These documents are publicly available for the interested parties at the website of the institution. The website has a specific section for students, which contains documents that are the most relevant for them. According to the studied documentation and the interview results, these regulations are fair, transparent, and consistent with Georgian legislation. The institution ensures the timely and effective implementation of the defined procedures. The interview results also confirmed that students are informed about existing regulations and their availability.</p> <p>The presented financial agreements confirm that the agreement between the HEI and a student includes the rights and obligations of both parties: the student and the institution. Considering the interview results, before signing the contract, students receive detailed information regarding the aforementioned rights and obligations.</p>

The Institution has mechanisms for the protection of students' rights and lawful interests and information regarding students' appeals. For instance, students have the opportunity to appeal on their assessments. GTU has established an objective and transparent procedure for the appeals procedure. In the case of disciplinary appeals, the Institution has a Commission of Ethics that operates according to the Code of Ethics.

Interviews with students indicate that while they are aware of the existing procedure for assessment appeals, they lack sufficient information regarding the role and functions of the Commission of Ethics, as well as the scope and objectives of the Code of Ethics. Consequently, it is suggested that the institution ensures students are thoroughly informed about both the Commission of Ethics and the Code of Ethics.

The representation and participation of students in the governing bodies are ensured. Student members are presented in both – the representative council (Senate) of GTU and each faculty council. The processes for the election of student members, as well as the proportion of students in the council, are detailed in the regulations of the HEI. Interview results have confirmed that student representation in the governing bodies is ensured and carried out according to the internal regulations. Nevertheless, non-member students, particularly international students, are not sufficiently informed about student representation in the Senate and Faculty Council. Thus, it is suggested that the institution ensures students are well-informed about their rights to elect or be elected as representatives in the Senate and Faculty Council, as well as about the role and functions of student members within these councils.

Another means to protect the students' rights and interests is through student self-government. GTU has defined rules and procedures for the election, governance, and the objectives of the self-government. Among the objectives of this body are the protection and representation of the interests of students; supporting students in the protection, strengthening, and practical realization of their rights and freedoms and their legitimate interests; assisting the university administration in improving the educational process; providing optimal conditions for students, as well as to diversify student life; etc. Interview results with international students confirmed that they are not engaged in the election process and the activities of student self-government. Although no formal barriers exist, it is evident that they require more information and support to become fully involved in the election and activities of the self-government. Accordingly, it is recommended that GTU ensures international students are sufficiently informed about student self-government and have the opportunity to exercise their right to elect or be elected as self-government members.

Evidences/indicators

- Self-evaluation report
- Instructions on formation and mobility of GTU student contingent;
- Regulation on PhD Studies;
- Regulation on Master's Studies;
- Instructions for managing the learning process of GTU;
- University Code of Ethics and Norms of Disciplinary Responsibility;
- Mission, Vision, and Values of Georgian Technical University;

<ul style="list-style-type: none"> • Financial agreements with students; • Interview results; • Website – gtu.edu.ge.
Recommendations: <ul style="list-style-type: none"> • It is recommended that GTU ensures international students are sufficiently informed about student self-government and have the opportunity to exercise their right to elect or be elected as self-government members. (Standard 5.1)
Suggestions: <ul style="list-style-type: none"> • It is suggested that the institution ensures students are well-informed about their rights to elect or be elected as representatives in the Senate and Faculty Council, as well as about the role and functions of student members within these councils. • It is suggested that the institution ensures students are thoroughly informed about both the Commission of Ethics and the Code of Ethics;
Best Practices (if applicable):
Evaluation <ul style="list-style-type: none"> <input type="checkbox"/> 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
5.2 Student Support Services
<ul style="list-style-type: none"> ○ HEI has student consulting services in order to plan educational process and improve academic performance ○ HEI has career support service, which provides students with appropriate counselling and support regarding employment and career development ○ HEI ensures students awareness and involvement in various university-level, local and international projects and events, and supports student initiatives ○ HEI has mechanisms, including financial mechanisms to support low SES students
Descriptive summary and analysis of compliance with the standard component requirements <p>Student Support Services at GTU involve the participation of the Institution's administrative, academic, and invited personnel. Consultations for the planning of the education process and improvement of academic performance are delivered by the academic/invited personnel, including heads of the educational programmes, and the responsible departments of the HEI. Counselling about the educational processes from the administration unit is outlined in the "Instructions for Managing the Learning Process of GTU." Information regarding available consultations is made known to students in advance, as confirmed by the interview results. Consultation hours are available in both printed and electronic forms, displayed within the university space and uploaded on the GTU website and the electronic learning process management portal – vici.gtu.ge. In addition to consultation hours, lecturers offer personalized counselling to students. Before signing the contract with the institution, students are provided with information regarding available services, study process, existing regulations and other important issues.</p> <p>GTU provides students with career support and employment services, primarily carried out by the Department of Public Relations, Culture and Sports, the Career Development Unit, and the Student Service Center. Functions of the Department of Public Relations, Culture and Sports include coordination of sports and cultural activities; creation and coordination of the alumni association; relations with</p>

students, student initiative groups, and student organizations; support and coordination of student projects and initiatives; communication with employers, students, and graduates of GTU; etc.

The Student Service Centre has one of the most crucial role in ensuring sufficient and efficient support for students. Its responsibilities include supporting students' development and professional advancement; enhancing collaboration between the private and public sectors to facilitate career growth for university students and graduates; communicating with university students and graduates; assisting students, representing and protecting their interests in the university's administration bodies; organization of scientific, including national and international conferences and workshops; supporting the involvement of university students in international educational and scientific projects; providing university students with information about various grant programmes and offering consultation where appropriate; promoting and encouraging student club activities; involvement in the planning of student forums; participation in the planning and execution of GTU sports and cultural events; etc.

Student projects and activities are also facilitated by student self-government and various student clubs. Several student clubs operate at the institution, such as the Niko Nikoladze Club, the Mishel Muskheli Club, and the Nodar Tabidze Club. Interview results confirm that students are well aware of the activities conducted by the self-government and student clubs.

According to interviews with students and reviewed materials, the Institution conducts career support activities, such as job fairs, meetings with potential employers, and training on relevant topics (e.g., CV and cover letter writing, job searching, and interview preparation). The documentation and interview results also confirm that students have the opportunity to participate in international mobility programs. The Department of International Relations supports students in the application process for exchange programs and other relevant issues. Since 2015, the "Erasmus+" programme has been implemented, with GTU offering up to 80 exchange projects (international mobility with credit accumulation) in collaboration with European partner institutions. As of October 1, 2018, approximately 230 students have benefited from the "Erasmus+" exchange programme.

Students receive information regarding these activities, available job vacancies, offered international exchange programs, and other student opportunities through corporate email, the electronic portal vici.gtu.ge, the GTU website, and the Facebook pages of the institution and relevant departments. According to the provided documentation, 83% of GTU alumni are employed, 70.4% are employed by their qualification. To gather and analyze feedback from students and alumni regarding their personal, professional and academic development, the institution conducts surveys and utilizes the results to improve its services.

GTU actively encourages employers to take part in developing and executing educational initiatives, internships, and other activities aligned with its academic programmes. The oversight of student internships is governed by the "Rules for Conducting and Assessing Students' Practices at Georgian Technical University." Internships are a vital component of higher education, enabling students to gain professional skills by applying theoretical knowledge in practical settings. Depending on the specific goals of the programme, internships may vary in focus, including educational, informational, industrial, technological, and other types. Internships can take place within GTU's facilities, such as study areas, educational-scientific laboratories, scientific-research institutes, or other structural units, or in external organizations, enterprises, or institutions that provide suitable conditions for internships and have a formal agreement or memorandum with GTU.

GTU offers financial support mechanisms to students. The "Rule of Granting Concessions Regarding the

Payment of Tuition Fees for Students" outlines the guidelines and requirements for financial support. To receive a tuition fee discount, students must apply to the Rector's office and provide documentation related to the circumstances specified in the aforementioned rule. Afterwards, the rector's decision and the application is forwarded to the representative council or the relevant faculty council, which makes the final decision. Additionally, GTU students, not only those in the categories listed in the "Rule of Granting Concessions Regarding the Payment of Tuition Fees for Students," can pay the tuition fee in four installments. GTU has 17,992 students with active status and 15,802 with suspended status. One of the frequent reasons for suspending a student's status is financial issues. Although the institution has mechanisms for financial support, this high rate of suspension warrants consideration. Accordingly, it is suggested that GTU consider further financial support mechanisms (such as dividing tuition fees into more than four instalments) to decrease the rate of students with suspended status.

Scholarships are also available at GTU, and students are informed about the possibility and general criteria for awarding scholarships. The orders of the Rector and interview results confirm that students have been awarded the scholarship and that the general procedure is known to them. However, despite the expert panel's request for a document outlining the criteria and procedure for awarding scholarships, no such document has been provided. It must also be noted that during the interviews, international students stated that they do not have the opportunity to be awarded existing scholarships at GTU and must seek such opportunities themselves. Therefore, it is recommended to formalize processes related to scholarships and develop a publicly accessible standard that ensures equal opportunities for both Georgian and international students.

Evidences/indicators <ul style="list-style-type: none"> • Self-evaluation report; • Instructions for managing the learning process of GTU; • Rule of Granting Concessions Regarding the Payment of Tuition Fees for Students; • Orders of awarding scholarships; • Memoranda; • Report on carried out activities; • Charter of GTU Student Self-government; • Student and alumni survey results; • Interview results; • Website – gtu.edu.ge.
Recommendations: <ul style="list-style-type: none"> • It is recommended to formalize processes related to scholarships and develop a public accessible standard that ensures equal opportunities for both Georgian and international students. • The University must employ a strategy to reduce the number of students suspended.
Suggestions: <ul style="list-style-type: none"> • It is suggested that GTU considers further financial support mechanisms (such as dividing tuition fees into more than four instalments) to decrease the rate of students with suspended status due to financial issues.
Best Practices (if applicable):
Evaluation <ul style="list-style-type: none"> <input type="checkbox"/> 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

6. Research, development and/or other creative work

Higher Education Institution, considering its type and specifics of field(s), works on the strengthening of its research function, ensures proper conditions to support research activities and improve the quality of research activities

6.1 Research Activities <ul style="list-style-type: none"> ○ HEI, based on its type and specifics of its fields, carries out research/creative activities. ○ Ensuring the effectiveness of doctoral research supervision ○ HEI has public, transparent and fair procedures for the assessment and defense of dissertations which are relevant to the specifics of the field
Descriptive summary and analysis of compliance with the standard component requirements <p>GTU is a higher educational institution with rich and centuries-old traditions. The first outstanding engineering school in the South Caucasus, which makes a significant contribution to the teaching and research process of the technical directions of the country.</p> <p>Among the historical achievements of the University, it is important that on its very basis, the technical terminology was created, the foundation was laid for the revival, study and research of technical fields.</p>

GTU carries out its activities within 13 faculties, 15 scientific-research institutes, educational, scientific-research and expert laboratories.

HEI tries to integrate its activities with the sustainable development goals, for which it implements projects such as: "Maintaining Sustainability towards Climate Change", "Reducing the Use of Fossil Fuels and Utilizing Alternative Thermal Energy Sources – Solar, Wind Energy", "Reduction of Emissions (Methane)".

Normative documentation presented by the university, the self-evaluation and the interviews conducted within the framework of the authorization visit confirm that:

- The University has developed and established a strategy for research activities;
- The University carries out scientific activities.

International collaborative projects with the world's leading scientific centers, KEK, J-PARC (Japan), CERN (Switzerland), FERMILAB (USA), INFN (Italy), JINR (Dubna, Russia) and others are especially important.

The studied documentation and the results of the visit reveal that during the reporting period, the university took important steps to support and strengthen research activities, 597 monographs, 958 textbooks and more than 7200 scientific works were published by the academic and scientific staff of GTU, both in Georgian scientific publications and in international scientific journals indexed in high-ranking databases. It is worth noting the increasing trend of scientific productivity in publications indexed in international scientific databases, as confirmed by data from the international scientific database Scopus. However, a significant portion of productivity comes from the fields of physics, mathematics, and civil engineering. According to SciVal (advanced analytics solution, built on a core of Scopus® data provided by Elsevier), there are approximately 250 research outputs yearly within the reporting period. There are in total 70 Academic Departments and 1184 academic staff and 380 researchers. This corresponds to an annual average of 0.15 research output per academic staff and researchers. This is a rather small number as compared to the international practice of academic institutions of similar size. It is expected that this average number must be at least 1.0.

During the reporting period, the university organized more than 180 scientific conferences for both students and scientific and academic staff. It must also be noted that important scientific journals of various fields operate at the university, where not only the scientific achievements of the professorship of the technical university but also the results of ongoing and completed research are published. Among these journals, it is worth noting: "Works of the Technical University of Georgia"; "Science and Technology", "Business Engineering", "Education", "Transportation and Engineering", "Oil and Gas" and others.

The visit to GTU confirmed the integration of the research results of the GTU scientists described in the self-evaluation report into the educational programs and syllabi of study courses, into the topics of master's and doctoral theses and the specifics of research.

More than 3 dozen doctoral programs are implemented at the 13 faculties of the Georgian Technical University, which, together with the faculties, are administered by the Doctoral and Master's Studies Service.

In the self-evaluation document, it is mentioned that in order to ensure the supervision of doctoral research, the GTU has developed and the academic council has approved the Provisions on Doctoral

Studies, which defines the functions, duties and rights of the scientific supervisor of the doctoral student, as well as the workload of the scientific supervisor, and the ratio of doctoral students and supervisors. A good international practice is to cap the number of PhD students supervised by a professor to be up to 5-7. During the interviews, it was not clear about the selection process of the PhD supervisors. Previous research experience and international practice have not been considered. There is no systematic approach regarding the training of the PhD supervisors.

According to the Survey conducted by the HEI, it is confirmed that the majority of doctoral students are satisfied with the supervisor's work, some are more or less satisfied, while a small number of doctoral students express their dissatisfaction. It should be noted that, according to the regulations of the doctoral program, the scientific supervisor of a doctoral student can be any professor of the faculty, an associate professor, or a researcher from an independent research unit. However, additional requirements for the supervisor are not defined. It is important to establish a minimum standard for the doctoral supervisor to ensure that the requirements for the doctoral student are met. In order to ensure fair and transparent procedures for the evaluation of dissertations relevant to the field, the University has created two university dissertation councils during the reporting period: Dissertation Council of Engineering, Technological and Natural Sciences and Dissertation Council of Humanities and Social Sciences. Before submitting the manuscript to the Council, it is discussed and evaluated by the Dissertation Defense Collegium, which is formed according to the topic at the relevant faculties. The evaluation and defence procedures of PhD thesis are defined in the Provisions on Doctoral Studies. In the process of interviewing, no dissatisfaction has been recorded regarding the evaluation. The self-evaluation document presents dissertation defense indicators in the reporting period. Since 2018, a total of 1,639 students have been enrolled in doctoral programs, of which 1,171 have obtained the academic degree of doctor.

The documentation presented by the University and the results of the interview show that the University must strengthen its work to ensure the efficiency of doctoral research in terms of research number outcomes and their quality using associated metrics.

Examining the defended thesis, as well as meetings with doctoral students and their scientific supervisors, it becomes clear that it is necessary to develop a cycle of additional trainings and workshops to ensure the high quality of papers submitted in high-impact journals. It is important to pay special attention to the format and main features of papers, the specifics of using sources and bibliographic heuristics and the development of a theoretical framework and methodological approach to research. The process of submitting works for defense must be stricter and a specific structural unit should control whether the formal side of the work or the standard of citations is followed.

The results of the interview confirmed that only the completed dissertation is checked for plagiarism, it is better to check the colloquiums or thematic seminars during the doctoral studies, which will develop certain skills for the doctoral students.

Among the changes implemented in the doctoral regulations (29.04.2020 No. 01-0504/75), it is worth emphasizing the increase in requirements for doctoral students. In particular, according to the current edition, a doctoral student must have at least three scientific articles published, with at least one article authored solely by the student, before the defense of his/her PhD thesis. Additionally, one of these papers must be published in a high-ranking, peer-reviewed international journal. However, interviews have revealed varying interpretations of this requirement. For example, a significant portion of the academic staff believes that the regulation mandates that a doctoral student publishes a scientific article in a journal indexed by the international scientific metric databases Web of Science or Scopus. Analysis

of the defended dissertations, however, does not confirm adherence to this requirement. Therefore, the expert group recommends clarifying this regulation by specifying that one of the requirements for doctoral students is the publication of a scientific article in a journal indexed by the Web of Science or Scopus databases, or, for those in the humanities and social sciences, in the ERIH Plus database.

GTU has defined within each Faculty different research areas. These research areas have some exposure and interactions with external stakeholders (e.g. SMEs industries). The University is focused on both theoretical and applied research. GTU has connected research with the high-tech industry. During the visit, the Experts had the opportunity to visit the following labs:

- Telecommunications laboratory
- SCADA laboratory
- Computer Networks Laboratory
- Metallurgy and mining Laboratory
- Mining Software Laboratory
- Mountains Laboratory
- Computational Intelligence Laboratory
- Computational Physics Laboratory
- Power Engineering Laboratory
- Chemical Process Laboratory

Some of the laboratories are very well equipped and have received international accreditation. The Labs are affiliated with Faculties. It seems that there is a link between the research laboratory activities and mission and objectives of each Faculty. Although the SER states that the aim is to drive multi-disciplinary research, this is not evident. The Labs have been used by both undergraduate and PhD students. The Universities provide funds to support the PhD programmes. Such funds show dynamic trends (declining in 2023) over the reporting period. Such trends are not explained in the SER. Within the same reporting period, there are some grants that have been received by external funding agencies. The SER explains that few research activities in the Faculty of Mountains are aligned with UN SDG goals.

There is not much information provided about the effectiveness of the PhD supervision in terms of years spent in the PhD programme, high-quality research outputs and management of suspensions. During the interviews, it was not clear about the selection process of the PhD supervisors. Previous research experience and international practice has not been considered. There is no systematic approach regarding the training of the PhD supervisors.

During the interview, few of the PhD students had difficulties interacting with the Experts in conversational English; it is a question how they managed to cope with the English B2 exam and write scientific manuscripts in English. Throughout the interview, the Experts realized that the PhD students work at the same time during their studies in the PhD programme; this is very challenging. This is evident from the large number of PhD students suspended from their Programme. It seems that the PhD students do not work as full-time to the allocated project; this is due to the fact that research funds are not enough to support the PhD students and their families. One of the benchmarks of the PhD programme is that the PhD students must publish their work in an international journal. This KPI is not met by all PhD students.

Evidences/indicators <ul style="list-style-type: none"> • Self-evaluation report; • 2022-2028 Development Strategy of the HEI; • Statistical data of scientific creative activities of academic and scientific staff of HEI; • Annual reports on the scientific research activities of HEI; • Memorandums signed with international and local economic agents; • Research projects implemented under the memorandums with international and local organizations; • Grants received from Shota Rustaveli National Science Foundation; • Grants received by doctoral students; • Research/creative activity development strategy; • Projects with annotations; • Articles published by GTU staff - with annotations; • GTU scientific conferences; • GTU publications - with annotations; • GTU articles in impact factor journals; • Workload and functions of academic and scientific staff; • Provisions on Doctoral Studies; • Provisions of Dissertation Council; • Website of the University; • Interview Results.
Recommendations: <ul style="list-style-type: none"> • It is recommended to provide mentoring support and training to the PhD supervisors. • It is recommended to revise the scholarship fees for the PhD students. • It is recommended to revisit the English exam to assess the level of the PhD students. • It is recommended to establish multi-disciplinary research activities through the collaboration among different Faculties and Research Centres. • It is recommended to increase substantially the number of publications and contributions in high-quality journals (Impact Factor larger than one, Q1 or Q2 according to scimago journal classification). • It is recommended that all the works performed by the doctoral students (not only the completed dissertation) must be checked for plagiarism (journal manuscripts, colloquiums, thematic seminars), which will help to develop their skills. • It is recommended to clarify the prerequisites for the defense of a PhD thesis, including the requirement of having a scientific article published in a journal indexed by the Web of Science or Scopus databases, or, for those in the humanities and social sciences, in the ERIH Plus database. • It is recommended to improve the procedure for appointing a supervisor for a doctoral student. The appointed professor must have conducted relevant scientific activities related to the thesis topic in the last three years, with publications in journals indexed by the Web of Science or Scopus databases, or, for those in the humanities and social sciences, in the ERIH Plus database.
Suggestions: <ul style="list-style-type: none"> • It is suggested to improve the collaboration of Doctoral Service with research institutes. • It is suggested to frequently conduct anonymous surveys with doctoral students in order to identify their problems and to plan appropriate measures; • It is recommended to revise the scholarship fees for the PhD students.
Best Practices (if applicable):
Evaluation <ul style="list-style-type: none"> <input type="checkbox"/> 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
6.2. Research Support and Internationalisation
HEI has Q1 an effective system in place for supporting research, development and creative activities

<p>Attracting new staff and their involvement in research/arts-creative activities. University works on internationalisation of research, development and creative activities.</p>
<p>Descriptive summary and analysis of compliance with the standard component requirements</p> <p>During the reporting period, the GTU took important steps to design effective research development and support systems.</p> <p>The information mentioned in the self-evaluation document, "The sources of financing are the state budget, which finances program research; research, which is based on the grant policy and includes funding from the Shota Rustaveli National Foundation and international scientific foundations, local university grants and grants obtained by doctoral students, as well as the income of self-financing centers" was proved by the interview results as well.</p> <p>University has the "Rules on submission, review and evaluation of grant project proposals", which provides for the evaluation and financing of projects submitted by GTU employees and students.</p> <p>It must be positively noted that the "Technology Transfer and Grant Projects Office" was established in the University during the reporting period, the purpose of which is, on the one hand, maintaining the awareness of employees and students about various grant proposals, and, on the other hand, their technical and informational provision in the process of development of grant proposals.</p> <p>The visit to the University and interview confirmed that GTU takes care of attracting new staff in various ways, the attraction of former students (of different levels) to various positions is especially welcomed. The GTU policy regarding visiting professors is also noteworthy. The interviews have confirmed that the University encourages their involvement in various projects and their development, and also takes care (taking into account its interests) to attract new academic staff and researchers.</p> <p>GTU promotes the development of scientific skills among students through annual student conferences as well as research centers and clubs.</p> <p>One of the priority directions of the GTU is the internationalization of research, for which important steps have been taken in the reporting period.</p> <p>HEI has signed memorandums with peer universities abroad and research centers to ensure the mentioned issue, which has provided more opportunities for joint research activities.</p> <p>Cooperation of the University with international networks and associations such as the European University Association (EUA), International Telecommunications Union (ITU), Black Sea Universities Network (BSUN), American Association of Colleges and Universities (AAC&U), and others. GTU's partners are the world's largest research centers, universities and companies operating in the field of technical sciences included in the international consortium: European Organization for Nuclear Research (CERN), Japan's High Energy Accelerator Research Organization (KEK), Massachusetts Institute of Technology and Darmstadt Technical University, Jefferson Scientific Association, Universities of California, Yale, Bern, Pisa, Tel Aviv, Glasgow, Osaka and Tokyo, Imperial College London, Berkeley National Laboratory, Paul Scherer Institute (Zurich), French Alternative Energies Nuclear Energy Commission (CEA), Italian Nuclear Research Organization (INFN), Nuclear Electronics Manufacturing Company (CAEN), French National Center for Scientific Research (CNRS), Julich Center for Nuclear Engineering.</p>

It must be noted that within the framework of agreements signed with research institutes, important projects have been implemented within the last 5 years (Nuclear Engineering Center, Institute of Quantum Physics and Engineering Technologies, etc.).

It is mentioned in the SER, and it was confirmed by the interview results, that work is underway to create joint master's and doctoral programs together with foreign partners, and in 2022-2023 projects under Horizon Europe and British Council funding calls have been implemented.

Despite the above, HEI must strengthen its work to support research in a more systematic manner. It is necessary to design and develop a more effective strategy for the internationalization of research. It is important to pay special attention to young staff with scientific potential in this process. It must be highlighted that academic and scientific staff must improve their English language skills, so that they can publish their research work in journals indexed in Scopus, Web of Science and other important databases.

The University must also develop a flexible incentive system for raising the interest and involvement of academic and scientific staff in the mentioned process. The newly created Grants Office at the University helps staff to develop grant proposals, it would be good if they helped professors find relevant journals and prepare articles, which will make this direction even more efficient and effective.

GTU's strategy aims to promote science and develop commercialisation. The source of funding to support research activities include state budget, research funds from different funding agencies and revenues from self-financing centres. The "rules for submission, review and evaluation of grant nomination project proposals" approved on the basis of Resolution No. 2 of the Representative Council of April 3, 2017. Figure 8 illustrates the funding per year within the reporting period. There are many dynamics of funds within the reporting period. There is no explanation regarding the declining trend in the period 2019-2021. There are no KPIs associated with research expectations from the self-evaluation report.

The GTU operates a centre for innovative activities of young scientists and students, aiming to strengthen the research potential of young people and awakens interest in engaging in research. It is not clear how this is linked with the research centres of the Faculties.

In order to support and develop research, the "Office of Technological Transfer and Grant Projects" was established in 2021. The main direction of its activity is the following: Developing a plan for grant financing and finding donors, encouraging efficient project management, informing university staff about international funds and organisations' grant programmes and offering advice on the terms and conditions of entering grant competitions, building a single university database of funded grant projects, encouraging the commercialization of scientific technologies and their introduction to the market, etc.

Evidences/indicators

- Mission of the University
- Self Evaluation Report
- Interviews
- Self-evaluation report;
- Development Strategy of the University;
- Resolution #2 of the Representative Council of April 3, 2017, on the procedure for submitting, reviewing and evaluating project proposals for grant competitions;
- Dynamics of funding of research, development and creative activities provided for in the budget during the last 6 years;

<ul style="list-style-type: none"> • Institutional cooperation with international research units; • Joint research activities with representatives of international organizations • Activities of the center promoting the innovative activities of young scientists and students of STU "ERTAD" ("Together"); • Website of the University; • Interview results.
Recommendations: <ul style="list-style-type: none"> • The University must develop an effective strategy and incentive system for research support towards internationalization.
Suggestions: <ul style="list-style-type: none"> • In order to ensure international recognition, it is suggested that at least 80% of the scientific and academic staff must be involved in international scientific activities. • It is suggested that the University should promote research outcomes. • It is suggested to set-up google scholar profiles for both academic staff and PhD students
Best Practices (if applicable):
Evaluation <ul style="list-style-type: none"> <input type="checkbox"/> 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
6.3. Evaluation of Research Activities
<p>HEI has a system for evaluating and analysing the quality of research/creative-arts activities, and the productivity of scientific-research units and academic/scientific staff.</p>
<p>Descriptive summary and analysis of compliance with the standard component requirements</p> <p>Both internal and external processes have been used to assess and evaluate the productivity of the academic and scientific personnel involved in GTU research activities. GTU evaluates the productivity of scientific-research units and scientific-academic staff according to the "Rules for evaluating the scientific-research activity of a scientific-research unit of the Georgian Technical University " approved by the Academic Council, which defines the criteria for evaluating various types of scientific activity. In particular, the following criteria have been considered: number of research projects funded by various resources, number of publications in national and international venues, number of patents, involvement in scientific forums, promoting the scientific work of young scientists.</p> <p>The submitted documentation, self-evaluation report and interview results state that the assessment is done once a year considering quantitative and qualitative data. It should be noted that the university has a special system my.gtu.ge where research activities of academic and scientific staff are registered. The report of research activity for external evaluation is also submitted to the Academy of Sciences of Georgia, the self-evaluation document states that after the evaluation of research activity, the university analyzes the results and outlines measures to eliminate problems. The SER has mentioned the vision towards multidisciplinary research activities. However, this is not evident.</p>

<p>The SER considers mainly qualitative metrics to evaluate research quality. The Institution has not considered international practice, where qualitative metrics have been considered. In the case of papers presented in international conferences, there is a minimum of 50% acceptance rate (e.g. https://portal.core.edu.au/conf-ranks/). In the case of publication of papers in international journals, metrics such as impact factor and Q quartile have been considered to benchmark journals' quality.</p> <p>For the purpose of external evaluation, the university annually prepares reports on the implemented scientific-research activities. According to Table 10, activities are arranged in the following categories: highest, good, satisfactory, negative and not rated. The categories negative and not rated are not very clear. The rationale behind these categories is not very clear.</p> <p>The interview results confirmed that the institution should take care to develop a more effective system of evaluation and analysis, it is especially important that the scientific and academic staff are provided with post-evaluation feedback and everyone has information on how well the staff meets the standard set by the university. The evaluation analysis should be used by the institution for further development.</p>
<p>Evidences/indicators</p> <ul style="list-style-type: none"> • Self-evaluation report; • Evaluation method of the scientific-research activity of a scientific-research unit of GTU; • Rules for submitting, reviewing and evaluating project proposals for grant competitions (grant funded by the university budget); • Citation indicators of scientific and academic staff of scientific-research institutes and faculties of GTU; • Grants received from Shota Rustaveli National Science Foundation; • Grants received from international institutions; • Annual reports of scientific-research institutes and centers of GTU; • Annual reports of scientific activities of faculties of GTU; • Website of the university; • Interview results.
<p>Recommendations:</p> <ul style="list-style-type: none"> • The University must use metrics such as citation counts, FWCI, i10 to benchmark academic staff and researchers' performance. • It is recommended that the evaluation analysis of the research quality efficiency must be used by the GTU to plan a new research strategy for further development.
<p>Suggestions:</p> <ul style="list-style-type: none"> • It is suggested that Term of Reference (e.g. research strategy, vision and priorities) is defined for each research centre. • It is suggested to use either Scopus (https://www.scopus.com/search) or Scimago (https://www.scimagojr.com/) to evaluate the quality of the research outcomes in international journals.
<p>Best Practices (if applicable):</p>
<p>Evaluation</p> <p><input type="checkbox"/> Complies with requirements</p> <p><input type="checkbox"/> Substantially complies with requirements</p> <p><input checked="" type="checkbox"/> Partially complies with requirements</p>

□ Does not comply with requirements

7. Material, Information and Financial Resources

Material, information and financial resources of HEI ensure sustainable, stable, effective and efficient functioning of the institution, and the achievement of goals defined through strategic development plan.

7.1 Material Resources

The institution possesses or owns material resources (fixed and current assets) that are used for achieving goals stated in the mission statement, adequately responds to the requirements of educational programmes and research activities, and corresponds to the existing number of students and planned enrolment.

HEI offers environment necessary for implementing educational activities: sanitary units, natural light possibilities, and central heating system.

Health and safety of students and staff is protected within the institution. HEI has adapted environment for people with special needs

Descriptive summary and analysis of compliance with the standard component requirements

According to the self-evaluation report, Georgian Technical University owns buildings totaling 187,547.9 sq.m., as recognized in the public registry. The official documents from the public registry are attached. However, after processing the presented documentation, the group of experts determined that the area registered in common ownership or use is confirmed to be 128,638.17 sq.m. (Document numbers: 01.10.13.023.055, 01.10.13.023.070, 01.10.13.023.181, 01.10.13.040.003.01.01.526, 01.10.13.041.016, 01.10.17.041.016, 01.11.17.001.024, 01.12.09.017.052, 01.14.05.007.073, 01.17.09.064.060, 34.02.50.038, see 1. of 7.1). In particular:

1. Area in Ownership: 13,197.91 sq.m.; Area in Use: 280.09 sq.m. (Document Number: 01.10.13.023.055);
2. Area in Ownership: (Tunnel-Laboratory) - 3,986.00 sq.m. (Document Number: 01.10.13.023.070);
3. Area in Ownership: 59,681.73 sq.m.; Area in Use: 1,123.83 sq.m. (Document Number: 01.10.13.023.181);
4. Area in Ownership: 1,910.41 sq.m. (Document Number: 01.10.13.040.003.01.01.526);
5. Area in Ownership: 17,536 sq.m. (Document Number: 01.10.13.041.016);
6. Area in Ownership: 761.7 sq.m. (Document Number: 01.10.17.041.016);
7. Area in Use: 3,041 sq.m. (Document Number: 01.11.17.001.024);
8. Area in Use: 9,952.4 sq.m. (Document Number: 01.12.09.017.052);
9. Area in Use: 2,915.1 sq.m. (Document Number: 01.14.05.007.073);
10. Area in Ownership: 14,252 sq.m. (Document Number: 34.02.50.038).

Moreover, according to the public register documents 01.14.05.007.073 and 01.17.09.064.060, it is evident that the land measuring 4,285 sq.m. with building N1 and the land measuring 27,538 sq.m. with a building on it have been transferred by the state to the Technical University of Georgia. It is likely that the difference between the data specified in the self-assessment document and the data processed by the experts is caused by the absence of information about the areas in the aforementioned documents 01.14.05.007.073 and 01.17.09.064.060. It is desirable for the self-assessment report to include this information as well.

The institution's self-assessment report does not indicate premises that it has leased out. As of July 8, 2014, based on the final documentation provided by the institution (see 2. of 7.1), the spaces provided for temporary use under invalid lease agreements are the following:

1. 535 sq.m. – Address: 77 Kostava St., III and IV Buildings; ID of Lessee: 404636774;
2. 422.32 sq.m. – Address: 36 Kakheti Highway; ID of Lessee: 405337960;
3. 1.5 sq.m. – Address: 77 Kostava St., VIII Buildings, fourth floor; ID of Lessee: 11001030438;
4. 6 sq.m. – Address: 77 Kostava St., VI Buildings, first floor; ID of Lessee: 01007012473;
5. 1.5 sq.m. – Address: 77 Kostava St., VIII Buildings, second floor; ID of Lessee: 412724002.

There is a discrepancy between the area indicated in the SER and the area provided in the official documentation. That is why it is described in detail. According to the documents from the public registry, the premises leased out by the institution are as follows (see 2. of 7.1):

1. 1,439.01 sq.m. – Address: VII Buildings, Liter "b", II floor; ID of Lessee: 237058811 and 212273252;
2. 1.5 sq.m. – Address: 77 Kostava St., VIII Buildings, fourth floor; ID of Lessee: 11001030438;
3. 1.5 sq.m. – Address: 77 Kostava St., VIII Buildings, second floor; ID of Lessee: 412724002;
4. 48.09 sq.m. – Address: VI Buildings, IV floor; ID of Lessee: 405140404;
5. 41 sq.m. – Address: VI Buildings, IV floor; ID of Lessee: 01026015146;
6. 39 sq.m. – Address: VI Buildings, VI floor; ID of Lessee: 60001140868;
7. 16 sq.m. – Address: VI Buildings, II floor; ID of Lessee: 01013007874;
8. 18 sq.m. – Address: VI Buildings, II floor; ID of Lessee: 01021007825;
9. 1 sq.m. – Address: VI Buildings, IX floor; ID of Lessee: 412724002;
10. 405.86 sq.m. – Address: III-VI Buildings, Tsikoli floor; ID of Lessee: 405343659;
11. 1 sq.m. – Address: VI Buildings, IX floor; ID of Lessee: 412724002;
12. 535 sq.m. – Address: 77 Kostava St., III and IV Buildings; ID of Lessee: 404636774;
13. 53.46 sq.m. – Address: II building, I floor; ID of Lessee: 404420113;
14. 65.01 sq.m. – Address: II building, I floor; ID of Lessee: 432386884;
15. 6 sq.m. – Address: 77 Kostava St., VI Buildings, first floor; ID of Lessee: 01007012473;
16. 405.86 sq.m. – Address: 68 Kostava str.; ID of Lessee 406172779;
17. 5 sq.m. – Address: 68 Kostava str., #29, fifth floor; ID of Lessee 01011048449;
18. 10 sq.m. – Address: 17 Guramishvili aven., ID of Lessee 01008055138.

Additionally, the following areas are assigned to various state structures (see 2. of 7.1.):

1. 538.21 sq.m. – Address: 77 Kostava str., VII building, IV floor; ID of user 204666977;
2. 513.57 sq.m. – Address: 77 Kostava str., VII building, V floor; ID of user 204666977;
3. 110.9 sq.m. – Address: #1, VI floor; ID of user 202374251;
4. 587.65 sq.m. – Address: #1, VII floor; ID of user 202374251;
5. 1,049.6 sq.m. – Address: #1, VIII floor; ID of user – Ministry of education and science of Georgia;
6. 175.37 sq.m. – Address: #1, V floor; ID of user –202294980;
7. 274.04 sq.m. – Address: #1, VI floor; ID of user –202294980;
8. 425 sq.m. – Address: 12 Noe Ramishvili str., I floor; ID of user - 404595176;
9. 150 sq.m. – Address: 17 Noe Ramishvili str.; ID of user - 404595176;
10. 422.32 sq.m. – Address: 12 Noe Ramishvili str.; ID of user - 405337960;

Consequently, according to the official documentation from the public registry, 128,638.17 sq.m. are registered in the ownership or use of GTU. Of this area, 3,186.29 sq.m. are leased out, and 4,246.66 sq.m. are assigned to various state structures. In the self-evaluation report of GTU, it is mentioned that according to the structures' measurement drawings (see 3. of 7.1),

the total teaching space is 108,678.945 sq.m., and the total auxiliary area is 78,868.955 sq.m. The teaching and supporting areas are clearly segregated. Teaching areas include study classrooms, conference rooms, professor offices, teaching/scientific research laboratories, libraries (excluding book storage), and other areas depending on the specifics of the educational programs. However, there is no unified document specified from which data on teaching areas can be obtained and measurement details can be verified through random observations. In the self-assessment report, it is noted that, given the specifics of the educational programs, the university has teaching/scientific research laboratories equipped with appropriate inventory, inventory required for the implementation of the practical component, information-technological equipment, and relevant supplies (reagents, training materials, etc.), which are required to achieve the educational program's goals and learning outcomes. To verify this information, the group of experts inspected the infrastructure, as previously agreed upon with the university:

1. Administrative Building – Central Library of GTU, Conference Halls; 77 Kostava Str. Tblisi, Georgia 0160
2. First building – Auditoriums, Laboratories, Faculty Library, Examination centers; 68 Kostava Str. Tblisi, Georgia 0160
3. 3rd Building – Mine-laboratory, Museum; 77 Kostava Str. Tblisi, Georgia 0160
4. 6th Building – criminology LAB, Archaeology; 77 Kostava Str. Tblisi, Georgia 0160
5. 8th Building – laboratories; 77 Kostava Str. Tblisi, Georgia 0160
6. 9th Building – Laboratories; 77 Kostava Str. Tblisi, Georgia 0160
7. 11th Building – Auditoriums, Laboratories; 17 Guramishvili str. Tblisi, Georgia 0192
8. Muskhelishvili Institute of Computational Mathematics. Grigol Peradze str. Tblisi, Georgia 0159.

During the visit, the Experts had the opportunity to visit the following labs:

- Telecommunications laboratory
- SCADA laboratory
- Computer Networks Laboratory
- Metallurgy and mining Laboratory
- Mining Software Laboratory
- Mountains Laboratory
- Computational Intelligence Laboratory
- Computational Physics Laboratory
- Power Engineering Laboratory
- Chemical Process Laboratory

Some of the laboratories are very well equipped and have received international accreditation. The Expert panel was extremely satisfied for some of the laboratory facilities to support educational activities. Few of the infrastructure in the labs are expensive. A challenge regards the fact that the OPEX costs may be too high for the maintenance of the equipment in these labs (e.g. tunnels in the Metallurgy and Mining Department, Measuring in Chemistry and Agriculture). Nevertheless, based on the presented information and the laboratories visited, it is impossible to draw a conclusion about how well all the laboratory work required by the educational programs can be fully performed with the existing infrastructure. Consequently, the expert group requested a brief descriptive report on the laboratories. Unfortunately, this information was not provided to the group of experts.

It should be mentioned that although GTU has completed significant refurbishment project completed during the reporting period, most of the inspected infrastructure is located in buildings

under renovation. Among the buildings and related infrastructure inspected by the expert group, Building 11 (address: Guramishvili St. #17), the Niko Muskhelishvili Institute of Computational Mathematics (address: Giorgi Feradze St. #4), and the administrative building (address: Kostava St. #77) have been found to be in compliance with HEI authorization standards. This includes meeting requirements for sanitary facilities, fire-fighting equipment, and adaptations for people with special needs. For the other buildings, the administration has indicated that renovation works are either planned or underway to provide appropriate environments for people with special needs and to improve sanitary facilities. Additionally, a complete rehabilitation of the 6th educational building is planned. In several cases, the expert group has observed that repair works are indeed in progress. However, to create a comprehensive overview, the expert group has requested detailed information about the current and planned repair works for each building, including the number of sanitary nodes, budget, and schedule. The institution has provided some information about the infrastructure projects (see 4. of 7.1), but this information does not offer a complete picture of the overall situation. Specifically, only the architectural project for the two sanitary nodes of Building I and the project for the sanitary nodes of the administrative building were provided. Additionally, the contract for the refurbishment works of the 6th building in 2023 (volume: 2,344,770 GEL), for the 1st building of GTU in 2023 (volume: 124,999 GEL), and for several buildings of GTU in the current year (volume: 2,504,429 GEL), along with some changes made to them, were presented.

Internal university documents have been submitted by the institution:

1. "Act of the Functioning of the Heating System" (see 5. of 7.1);
2. "Act on the Functioning of Electrical Networks and Electrical Distribution Devices" (see 6. of 7.1);
3. "Act on the Functioning of the Water Supply and Drainage System" (see 7. of 7.1);
4. "Instruction of Personnel Actions to Ensure Evacuation in Fire Conditions" (see 8. of 7.1);
5. Obligation of the medical staff and the contract signed with one of the employees (ophthalmologist) (see 9. of 7.1);
6. The labor contract signed with one of the employees in the position of guard and the list of tasks (functions) to be performed (see 10. of 7.1).

According to the staff schedule presented by the institution (see 11. of 7.1), the University has a security service. This service includes a head, a deputy head, and group heads (four staff units). Staff for the position of guard are hired on a contractual basis.

During the visit, in the interview with the staff and students of GTU, some concerns have been expressed about the lack of a catering facility and the failure of the material and technical base in some faculties. The need for the refurbishment of sanitary nodes has been emphasized. Based on the interview, the group of experts additionally planned an inspection of the II building. As a result of the visit, it was noted that although the institution has carried out some renovation works in parts of the building, a significant portion of the remaining laboratories still requires renovation. The representatives of the institution explained that repair works are ongoing and planned for the future as well.

To summarize, few of the buildings are modern, following international practice, few buildings have been refurbished; few are rather old where there is a plan for renovation. All buildings have facilities to support education, research and extracurricular activities to support all disciplines from engineering to agriculture and social sciences. There is no clear information when all innovations in the buildings will be completed.

The visited buildings of GTU include classrooms, laboratories and offices etc. The buildings are equipped with the necessary facilities (desks, chairs) and IT equipment (PCs, boards, projectors) for curriculum programmes and research activities to meet the expectation of the mission of the Faculties. During the visit, it was noticed that few of the PCs in the laboratories are old with outdated Operating System (e.g. subject to high cyber security risk). There was a lack of smoke detectors in a few of the toilets.

There were no sanitary units in all buildings. Few of the buildings do not have elevators and there is a lack of providing access to students with mobility issues (disabled students). The escape plan in case of fire, is not evident in all buildings. There is no designated fire warden in each building to enact fire evacuation procedures.

As it is described in SER and also, inspection the infrastructure confirms:

- The classrooms have natural as well as artificial light;
- Buildings have additional emergency exit(s);
- Institution has a medical cabinet equipped with first aid tools, both natural and artificial lights, natural ventilation, and constant supply of cold and hot water;
- Institution has security video recording and storing facilities installed both inside and outside of the buildings, throughout the premises
- Students with special educational needs have access to learning resources considered by a programme or individual teaching plan, that are adapted to their needs and demands; However, as we already mentioned, Few of the buildings do not have elevators and there is a lack of providing access to students with mobility issues (disabled students)
- There is a parking lot for people with disabilities.

It must be noted that the "Strategic Action Plan" presented by the institution covers the years 2022-2024. Consequently, it does not provide a clear picture of the renovation plans for the future, making it difficult to assess the process. Based on all of the above said, the group of experts considers it useful and/or expedient for the further development of the institution in the following ways:

1. To specify the area of ownership and use of the institution according to the documents from the public register;
2. To specify the area leased out by the institution according to the documents from the public register;
3. To prepare a single document about the teaching areas according to the structures' measurement drawings;
4. To prepare a brief description of the laboratories, specify the average weekly load of each laboratory based on the data from the previous three years (including the number of students),

and assess the growth potential of its use;

5. To prepare a detailed refurbishment plan (maximum three years) for the institution's buildings and related infrastructure (sanitary nodes; fire-fighting equipment; environment adapted for people with special needs; catering facilities) and determine the estimated budget;

6. To determine the list of teaching laboratories that need to be renovated, prepare a detailed renovation plan (maximum three years), and determine the estimated budget;

7. To prepare a strategic/action plan for finding financial resources as determined by the corresponding budget for the rehabilitation/renovation plan of buildings, relevant infrastructure, and laboratories

Evidences/indicators

- Documents verifying real estate ownership;
- Internal dimensional drawings of the building;
- Implemented and ongoing infrastructure projects;
- Information about valid lease agreements;
- Act of the Functioning of the Heating System;
- Act on the Functioning of Electrical Networks and Electrical Distribution Devices;
- Act on the Functioning of the Water Supply and Drainage System;
- Instruction of Personnel Actions to Ensure Evacuation in Fire Conditions;
- Obligation of the medical staff and the contract signed with one of the employees (ophthalmologist);
- The labor contract signed with one of the employees in the position of guard and the list of tasks (functions) to be performed;
- Staff schedule of GTU;
- SER;
- Site visit;
- Interviews

Recommendations:

- GTU must prepare a detailed refurbishment plan (maximum three years) for the all of the institution's buildings and related infrastructure (laboratories, sanitary nodes; fire-fighting equipment; environment adapted for people with special needs; catering facilities) and determine the estimated budget;
- The University must provide escape plans for each building with designed signs.
- The University must allocate a Fire Warden in each building.
- The University must introduce a training process for both academic staff and students in health and safety procedures.

Suggestions:

- It is suggested to specify the area of ownership and use of the institution according to the documents from the public register.
- It is suggested to specify the area leased out by the institution according to the documents from the public register.
- It is suggested to prepare a single document about the teaching areas according to the structures' measurement drawings.
- It is suggested to prepare a brief description of the laboratories, specify the average weekly load of each laboratory based on data from the previous three years (including the number of students), and assess the growth potential of its use.
- It is suggested to use ergonomic chairs in the buildings.

Best Practices (if applicable):**Evaluation**

- ☐ Complies with requirements
- ☐ Substantially complies with requirements
- ☒ Partially complies with requirements
- ☐ Does not comply with requirements

7.2. Library Resources

Library environment, resources and service support effective implementation of educational and research activities, and HEI constantly works for its improvement.

Descriptive summary and analysis of compliance with the standard component requirements

GTU has a Central Library (located in central administration building VIII). According to the SER, GTU library offers printed and electronic resources in both reading rooms and temporary possession to professors and students across all disciplines. There is a process how books and journals are borrowed. There is a process to constantly update both paper-based and electronic resources for both teaching and research activities across all Faculties. Each Faculty has also a reading hall with periodicals related to the Faculty's educational and research activities. Additionally, the library includes book archives from Georgian, European, and American editions of technical, engineering, and humanitarian specialties from the 18th, 19th, and 20th centuries. The GTU library includes office space for both academic staff and students. However, there are not rooms so that students can work in group-based projects. There are Wi-Fis and computers connected to the Internet. It is very positive that study resources are accessed online. During the visit, the Experts have the opportunity to discuss with library staff access to the following digital databases: ScienceDirect, Scopus, ACM, e-duke, IMechE Mathematical Journals etc. The SER defines a procedure for development and renewal of the library resources, so that programme learning outcomes are met. It is not clear whether students access these databases when they are connected when they are outside University. The requests for the purchase of new material is provided by the academic staff.

However, the Library does not have access to IEEE (Institute of Electrical and Electronic Engineering) digital library (IEEE Xplore), which is very important for the PhD Programmes in the Faculties of Informatics and Power Engineering.

Evidences/indicators <ul style="list-style-type: none"> • SER; • Site visit; • Interviews; • Additional documents provided.
Recommendations: <ul style="list-style-type: none"> • The Institution must subscribe to IEEE Xplore • The library must provide rooms for group-based projects
Suggestions: <ul style="list-style-type: none"> •
Best Practices (if applicable):
Evaluation <ul style="list-style-type: none"> <input type="checkbox"/> Complies with requirements X Substantially complies with requirements <input type="checkbox"/> Partially complies with requirements <input type="checkbox"/> Does not comply with requirements
7.3 Information Resources
<p>HEI has created infrastructure for information technologies and its administration and accessibility are ensured</p> <p>Electronic services and electronic management systems are implemented and mechanisms for their constant improvement are in place</p> <p>HEI ensures business continuity</p> <p>HEI has a functional web-page in Georgian and English languages.</p>
Descriptive summary and analysis of compliance with the standard component requirements <p>GTU has worked towards digital transformation. The IT department has deployed two data centres that run Xen hypervisor. GTU has introduced a different set of electronic services and electronic management systems, which ensure effectiveness, efficiency and accessibility of management of services and processes.</p> <p>There is a Learning Management System(LMS) deployed to support courses in various programmes. The IT infrastructure is sufficient to support different organization units of the Institution. The University has deployed appropriate tools to manage workflows and generate analytics that is critical for the decision-makers. There is data protection mechanism in place for managing personal data.</p> <p>All educational computer classes, laboratories, and research centres are connected to the internal network, providing access to digital services for both staff and students. PCs support both Microsoft and Linux OS. Both Google and Microsoft cloud services have been used. The Experts noticed during the visit, that few of the labs are equipped with PCs with outdated OS. This imposes a serious IT cyber security risk for the entire GTU intranet.</p> <p>During the interview with the IT team, it was found there is a lack of two-way factor authentication approach considered, which is quite important to minimize cyber vulnerabilities' risks. There is an antivirus programme installed. However, it is not clear where malware detection software has been deployed. The Web page of the GTU is provided in Georgian and English.</p>

Evidences/indicators <ul style="list-style-type: none"> • SER of GTU; • Site visit; • Interviews
Recommendations: <ul style="list-style-type: none"> • It is recommended to adopt two-way factor authentication. • It is recommended to replace PCs with outdated cyber-risk Operating System. • It is recommended to Install anti-malware software.
Suggestions:
Best Practices (if applicable):
Evaluation <ul style="list-style-type: none"> <input type="checkbox"/> Fully 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
7.4 Financial Resources
<p>Allocation of financial resources described in the budget of HEI is economically achievable Financial standing of HEI ensures performance of activities described in strategic and mid-term action plans HEI financial resources are focused on effective implementation of core activities of the institution</p> <p>HEI budget provides funding for scientific research and library functioning and development Affirms HEI has an effective system of accountability, financial management and control</p>
Descriptive summary and analysis of compliance with the standard component requirements <p>The financial resources of GTU have been analysed by taking into account the resources provided by both public (governmental) and external resources. Although the authorization standard 1.2. provides financial information (separate document in Excel file) associated with wages, goods and services, etc., to meet the strategic goals, limited information is provided regarding the analysis of the cost distribution per category. As an effect, the financial plan developed that has been approved by the Academic Senate of the University, does not include rationale regarding the costs per category in the reporting period.</p> <p>During the interview, it was highlighted by the executive team that the budget is tight. However, as part of the vision and the strategy, there are no areas of priorities that are evident. During the interviews, the executive team highlighted the increase in the salaries for both academic and administrative staff within the reporting period. This can be reflected from the financial planning that has been provided. However, no information has been provided regarding the increase in the costs associated with the goods and services category.</p> <p>During the visit, the Experts had the opportunity to visit several labs where physical equipments are currently used. There is an associated cost (OPEX) with maintenance costs (e.g. tunnel in the Metallurgy</p>

<p>and mining department). The costs associated with maintenance costs of a few labs can be quite high. There is a lack of a sustainability model to maintain such infrastructure.</p> <p>There are no appropriate KPI metrics to assess and evaluate the effectiveness of budget distribution in different cost categories. There is a need for GTU to adopt a sustainable model and reduce such costs. It is important to revisit the investment on actual infrastructure and equipment and adjust the laboratory activities by exploiting VR and software opportunities as part of the education programme delivery.</p>
<p>Evidences/indicators</p> <ul style="list-style-type: none"> • SER; • Interview; • Visit; • Financial Budget.
<p>Recommendations:</p> <ul style="list-style-type: none"> • To prepare a strategic/action plan for finding financial resources as determined by the corresponding budget for the rehabilitation/renovation plan of buildings, relevant infrastructure, and laboratories, it is recommended to revise the financial plan and use KPIs to assess the effectiveness.
<p>Suggestions:</p> <ul style="list-style-type: none"> • Some of the lab facilities (e.g. Metallurgy tunnel) are too expensive to maintain. It is suggested to replace them with software tools
<p>Best Practices (if applicable):</p>
<p>Evaluation</p> <p><input type="checkbox"/> Complies with requirements</p> <p>X Substantially complies with requirements</p> <p><input type="checkbox"/> Partially complies with requirements</p> <p><input type="checkbox"/> Does not comply with requirements</p>

To the Director of LEPL - National Center for
Educational Quality Enhancement
Mr. Aleksandre Tsuladze

19th of September 2024

To: Mr. Tsuladze,

Dear Mr Tsuladze,

Please find below in blue colour, the Experts' team response on the factual circumstances and assessments of Georgian Technical University on the recommendations outlined in the draft report.

Standard I - evaluation according to the draft report: Substantially in compliance with the requirements.

Component 1.1.

Recommendation №1.

The Institution must clearly define the strategic focus of GTU's operations with respect to the four pillars defined in the mission document.

The position of the University:

The Mission statement of the University and the Vision and Values formed from it, are based on the visions and values recognised in the developed part of the global world, as well as the historical purpose of the state significance and the centuries-old academic, social and cultural traditions attributed to the Technical University of Georgia. The Vision of the university presents the pillars of autonomy, academic freedom, unity of learning, teaching, and research, principles of equality and transparency, as well as internationalisation of the teaching and research process, the degree of realisation of which depends on many objective and subjective factors. The list of these factors is extensive, but the most significant of them are applicable legislation, corporate compliance, degree of recognition of the University through a qualified process, university values, top and middle-level management and management style, quality culture, staff qualifications, organisational structure compliance and annual quantitative or qualitative, including international cooperation indicators. For each of the listed directions, the relevant structural unit of the University, in close cooperation with the University Quality Assurance Service, permanently ensures information processing, analysis, and evaluation, the

results of which are reviewed annually by the University Academic Council and Representatives Council.

Based on the above, for the permanent implementation of the university's mission and the fundamental pillars established in the vision, time-defined strategy documents and a Strategic Action Plan have been developed. Those are qualified and constructive methodology and roadmap-defining documents. As for the control and evaluation of the implementation of the Strategic Action Plan developed on the university's strategy documents basis, these are carried out with an interim report every 6 (six) months at the end of the academic semester, and with an annual report, at the end of the academic year. The mentioned reports, their analysis, and evaluations, as well as the issued recommendations, are submitted by the Department of Strategic Development at appropriate (six-month and one-year) intervals to and reviewed by the University's Academic Council.

Based on the above, we believe there is no need for a recommendation proposed to the university concerning the implementation and assessment methodology, implementation map, and evaluation methods for the institution's mission and vision.

[Response from the Experts:](#) Although the University have defined the pillars that will drive vision, it is not clear how the strategy is linked within different activities. No changes regarding this recommendation.

Recommendation №2.

It is recommended that the mission statement be linked with objectives so that they can be monitored and measured.

The position of the University:

The strategy document of GTU development in content and factual terms considers its mission, vision, and values.

7 strategic directions are defined in the strategy document of GTU development:

- ❖ Organisational Development;
- ❖ Quality Assurance;
- ❖ Teaching and Learning;
- ❖ Scientific Research and Innovation;
- ❖ Internationalisation;

- ❖ Student Life;
- ❖ Social Responsibility.

The university has approved a Strategic Action Plan, which describes the activities planned for the midterm according to the strategic directions of the university. The Action Plan includes tasks, activities, responsible structural units, deadlines, resources, and performance indicators. The Action Plan is designed for 3 years and is updated annually.

The Strategic Development Department monitors the implementation of the Strategic Action Plan twice a year in close cooperation with all structural units of the university, including the Quality Assurance Service. According to the needs identified by the analysis and evaluation of the monitoring results, a draft of the revised document is developed and submitted to the Academic Council in the form of a report. The final recommendations formed after discussion at the Academic Council are envisaged in the next year's Strategic Action Plan. The university has received the ISO:9001 certificate in 2022. According to the ISO:9001 procedures implemented in the university, both interim and annual reports on the Action Plan implementation of the GTU structural units are prepared. The purpose of those reports is the identification of the performance indicators of the structural units' obligations stipulated by the Action Plan. Monitoring is carried out per the ISO:9001 procedures implemented in GTU, which helps to reveal the achieved results and current challenges.

Based on all of the above, we believe that the compliance of the institution's Mission statement with its strategic goals does not raise any questions; there is no challenge in monitoring and evaluating the implementation of strategic objectives, and accordingly, there is no need for indication №2 developed by the draft report to the university, especially in the form of a recommendation.

Response from the Experts: Besides the Strategy Development Department, there is a need to define KPIs at the higher level, so that Academic Council can monitor them. No changes regarding this recommendation.

Recommendation №3.

It is recommended that the Institution to assure the engagement of all stakeholders in the mission development process.

The position of the University:

It is a proven fact that the Technical University of Georgia, while working on the development of the mission statement and the strategic development of the university, ensures the highest

degree of transparency and involvement, not only of the university community and structural units but also of the university's partner entities, graduates, representatives of state legislative and executive bodies in the field of education and science, and all other stakeholders.

From this point of view, during the reporting period, the university Rector personally presented in detail the draft strategic goals and strategic statements in the largest Ivane Javakhishvili assembly hall of the Georgian Technical University, with the maximum rate of attendance and involvement. The information concerning the mentioned was published in the form of the relevant period news on the university website, as well as in popular news media throughout the country. In addition, the University employs all appropriate information technology tools to ensure discussion, feedback, relevant information, and communication.

Accordingly, we believe there is no need for a recommendation to the university to ensure the involvement of stakeholders in the mission development process.

Considering all the above, it is the justified opinion of the university, and we believe that there is a need for the expert panel to discuss the issue of revising the assessment of component 1.1. of the first standard of authorisation.

[Response from Experts:](#) During the visit, it is not clear whether all stakeholders are engaged in the mission development process. No changes regarding this recommendation.

Component 1.2.

Recommendation №4.

It is recommended to define qualitative metrics for the 7 Strategic Directions and link them with priorities.

The position of the University:

7 strategic directions are defined in the strategy document of GTU development:

- ❖ Organisational development;
- ❖ Quality Assurance;
- ❖ Teaching and Learning;
- ❖ Scientific Research and Innovation;
- ❖ Internationalisation;
- ❖ Student Life;
- ❖ Social Responsibility.

The university quality assurance system ensures qualitative evaluation of each strategic direction by appropriate mechanisms and tools.

In the descriptive part of the expert panel's draft report, no specific direction is mentioned; therefore, the university lacks the opportunity to present a particular reasoning. Herein, part of the information is provided in the university's response to recommendations №10 and №11. The introduced and implemented quality assurance system and mechanisms of the university cover all seven strategic directions and are presented in the authorisation self-assessment report and attached documentation.

Response from Experts: Besides the university quality assurance team, other stakeholders must participate and define qualitative metrics. No changes regarding this recommendation.

Recommendation №5.

It is recommended to provide a mapping from the 7 Strategic Directions to organisational units.

The position of the University:

7 strategic directions of the university include 20 strategic goals. Based on the Strategic Development Plan, a midterm Action Plan has been developed. In response to each goal, the Strategic Action Plan provides objectives with corresponding activities. Concerning each activity, the structural unit(s) responsible for carrying out the activity are defined and assigned. The assignment of structural units to a specific activity is based on these structural units' service competencies, defined by the provisions of the corresponding structural units and the approved unit work process document developed within the ISO 9001 framework.

Based on the above, there is a completely and clearly established system in the university, which ensures cooperation between the structures at the appropriate level. Consequently, there is no need for the recommendation №5.

Response from Experts: There is a need to cascade the Strategic Directions to organisation units. This cascade is missing at the moment. No changes regarding this recommendation.

Recommendation №6.

It is recommended to adopt Equality, Diversity and Inclusion in the Strategic Objectives.

The position of the University:

Equality, diversity, and inclusiveness are values integrated into university activities considered in the implementation of planned tasks for the permanent achievement of each strategic goal.

Response from Experts Team: It is not evident that EDI has been adopted within organisation units. No changes regarding this recommendation.

Recommendation №7.

It is recommended to monitor and assess all organisation units at top level.

The position of the University:

Within the framework of recommendation №2, it was mentioned and we repeat once more that the monitoring of the Action Plan implementation is carried out by the Strategic Development Department twice a year in close cooperation with all structural units of the university, including the Quality Assurance Service. According to the needs identified by the analysis and evaluation of the monitoring results, a draft of the revised document is developed and submitted to the Academic Council in the form of a report. The final recommendations formed after discussion at the Academic Council are envisaged in the next year's Strategic Action Plan. In addition, the Internal Audit Service functions effectively in the university, with a high degree of autonomy. Comprehensive information about its activities is presented in the authorisation documentation and includes a qualified inspection of all structural unit activities. The Internal Audit Service of the university presents the audit results in the form of an annual report to the Academic Council, where a detailed review is carried out and, if required, instructions issued. According to the legislation, the Academic Council is the highest collegial body of the university. Accordingly, there is no need to issue instructions on all structural units monitoring and evaluation results at the highest level, as proposed by the recommendation.

Response from Experts: It is important to benchmark performance of Organizationalm Units. No changes regarding this recommendation.

Standard II - evaluation according to the draft report: Substantially in compliance with the requirements.

Component 2.1.

Recommendation №8.

GTU has a large number of Faculties (there is also large number of Departments in some Faculties) and research institutes. It is recommended to optimise the number of Faculties and research institutes and rename the Faculties accordingly. (Standard 2.1)

The position of the University:

The Technical University of Georgia acknowledges the recommendation and works in this direction. The issue of clustering at the level of scientific research institutes is discussed in close cooperation with the Ministry of Education, Science, and Youth of Georgia. And, work in the direction of the principal educational units - faculties optimisation, is ongoing in the management bodies of the university. Including, the change of their name.

[Response from Experts: No comment provided. No changes regarding this recommendation.](#)

Recommendation №9.

It is recommended to structure the role of research centres and their interaction with Academic Departments.

The position of the University:

The university has good experience in educational-scientific cooperation between faculties, academic departments, and scientific institutes. At the current stage, collaborative scientific programmes are being implemented in many directions with the participation of scientists, professors, and doctoral students, both in specific fields and interdisciplinary directions. In addition, the university strengthens the quality of cooperation and annually allocates additional resources in this direction. Therefore, the University shares the recommendation №9 as a suggestion.

[Response from Experts: Due to the large number of Academic Departments, the research centre mission and objectives must be revisited to optimize resources and improve research outcome. No changes regarding this recommendation.](#)

Component 2.2.

Recommendation №10.

It is recommended that the University to conduct a comprehensive analysis integrating data from all faculties to gain valuable insights into overall academic performance and trends, thereby identifying common strengths and areas for improvement.

Recommendation №11.

It is recommended to establish a more systematic annual schedule for conducting and reviewing studies among students, graduates, invited, academic, and administrative personnel, and independent research centers as well as resources (e.g. library). The results of these studies must be systematically analysed and compared year-over-year to track progress and identify

trends. This regular assessment will ensure continuous improvement and alignment with the university's goals and standards.

The position of the University:

The documentation attached to the authorisation application, as well as requested and immediately provided during the visit of the expert panel, confirms that the quality assurance system of the Technical University of Georgia ensures a complex study, analysis, evaluation, development of recommendations, and monitoring of the implementation of the recommendations annually, at faculties and the university levels. In particular:

1. The analysis documentation of the Technical University of Georgia external institutional evaluation was accessible to the expert panel, which also contains the analysis and evaluation of the provided recommendations implementation.

2. The documentation demonstrating the activities of the faculty commission of each principal educational unit of the university, which comprehensively studies, analyses, and evaluates the learning process and learning environment of each training programme, was also available to the expert panel. The regulations of the faculty commission's activity directly envisage the annual reporting of the commission's activities results to the Quality Assurance Service of the university, which aims to carry out a complex analysis at the university level. This mechanism works properly and in the form of annual reports, it is submitted to the Academic and Representatives Councils and specific recommendations are issued, the performance of which is reflected in: 1. modifying the educational programme; 2. the creation of a new training course; 3. strengthening the training or research components; 4. the organisation of training in a specific direction; 5. strengthening/modernising the laboratory base; 6. diversifying the practice facilities, etc.

3. The reports of the semester survey of students according to each faculty organised and supervised by the University Quality Assurance Service, which included the target groups, description of the research process, general research framework, methodology, and research tools, the analysis of the principal trends and the general statistical picture, with the relevant quantitative indicators, the general mood of the students concerning the completed training courses, assessment of the head of training courses/ academic staff, evaluation of practical and group work components efficiency, assessment of difficulties to be overcome within training courses, assessment of knowledge and abilities acquired within the training courses, the survey of satisfaction with the evaluation system used by the lecturer, assessment of learning environment- conditions (working environment, access to resources, material, and technical equipment, software provision), conclusions and recommendations, were available to the expert panel. As mentioned above, the organisation of the process and the supervision of the student semester survey report development is ensured by the university Quality Assurance Service, in close and intensive cooperation with the quality assurance services of each faculty.

4. Evaluation reports of the research component, organised and supervised by the University Quality Assurance Service, for each faculty, were also available to the expert panel, which included: Target groups; research process; general research framework, methodology, and research tools; the principal trends and the general statistical picture; the profile of the student and the current stage of research activity; study of the satisfaction by the scientific supervisor's services; evaluation of the planning-implementation process and the presentation of research results (prospectus/colloquium/preliminary defence) and its support efficiency; survey of satisfaction with university research infrastructure and environment (educational/research resources, support services, material and technical equipment and their accessibility); assessment of difficulties related to the research process; evaluation of the knowledge and competencies acquired within the framework of the research component; assessment of the prospects of dissemination and internationalisation of research results and their support; conclusions and recommendations. As mentioned above, the organisation of the process and the supervision of the student semester survey report development is ensured by the university Quality Assurance Service, in close and intensive cooperation with the quality assurance services of each faculty.

5. A mechanism for evaluating the learning outcomes of each educational programme was available to the expert panel, one of the essential components of which is the analysis of students' academic performance, which is carried out permanently, after the end of each academic semester (interim) and each academic year (annual). In addition, for each educational programme, a full-cycle complex evaluation, including the student's academic performance analysis, is carried out according to the learning outcomes evaluation mechanism. In the first stage, all these data are accumulated and analysed at the faculty level. Then, according to the standard procedure, in compliance with the uniform rules established for the proceedings, they are sent to the quality assurance service of the university, which evaluates the information received from the faculties in the overall view, in close cooperation with the colleagues structures (academic departments, deans office, educational process management service, Science and Innovation Department, Internal Audit Department, etc.) plans and implements follow-up activities.

6. The expert panel had access to the university's academic, invited, administrative, and support staff satisfaction survey reports, which are conducted annually by the university's Quality Assurance Service and Human Capital Management Department, and include: Target groups; research process; research tools; the distribution of personnel participating in the survey according to categories; academic, invited, administrative, and support staff satisfaction survey results; demographic, administrative, and academic profiles of interviewed staff; competencies and professional development; assessment of university resources, environmental conditions, and their development needs; the quality of internal communication and the efficiency of information management; the balance between academic, scientific and administrative activities; the quality and effectiveness of problem

management; the use of modern technologies in activities, including teaching and research; assessment of student competencies and needs from the perspective of academic staff; labour compensation, incentive mechanisms, and their efficiency; corporate identity, collegial environment/relationship assessment; the third mission of the university; staff involvement in professional, community and civic organisations and associations and key findings and trends.

The above-mentioned six-point reference of the university completely covers the directions presented in the descriptive part of component 2.2 of the expert draft report concerning recommendations №10 and №11, however, it does not represent an exhaustive list of the mechanisms and tools provided by the quality assurance system of the Technical University of Georgia.

The authorisation documentation and the programme accreditation processes carried out during the reporting period of each educational programme, including the long-term process of international accreditation concerning 9 programmes, prove without a doubt that in the institutional development of the university, as well as in the development of each educational programme, all stakeholders are involved in the best way and capacity, including all categories of the university community, students, employers, alumni, partner organisations, international advisers, professional associations and government agencies.

Based on the above, we believe there was no need for the university to issue a recommendation on conducting a comprehensive analysis in the directions indicated by the recommendations and to give it a systematic character.

Experts Response: The Institution has provided a wide study conducted among the staff for only one year. That is why the term 'systematic' has been used in the recommendation. No changes regarding this recommendation.

Recommendation №12.

To ensure a more flexible and user-friendly experience, it is recommended that the completion of students' questionnaires for some students must not be obligatory. This would encourage voluntary and genuine feedback from all students without restricting their access to other important academic information.

The position of the University:

The Vici.gtu.ge electronic system has been operating throughout the university since 2021, providing every student, as well as academic and administrative staff, the opportunity to participate in university surveys.

Through the mentioned electronic system, the survey platform, by assigning a unique code, ensures, without exception, the anonymity and voluntariness of the respondents participating in each survey.

Based on the above, it is unambiguous that there is no need to issue recommendation №12 developed within the framework of component 2.2.

Response from the Experts: During the interaction with students, it was mentioned to the Experts that this questionnaire was obligatory. No changes regarding this recommendation.

Component 2.3.

Recommendation №13.

Since AI is a new trend, it is recommended to follow the achievements of European, USA, or UK universities concerning AI policy.

The position of the University:

Georgian Technical University closely monitors and implements best practices, including in response to challenges arising from the development of technologies. One of such challenges is the role of artificial intelligence in educational and scientific activities, the opportunities and threats arising from it, and the university policy for its positive regulation. The university consults on the challenges of artificial intelligence in many international formats and collaborates with professors from San Diego State University, the University of Los Angeles, Long Island University, the University of Bonn, and the University of Zadar, as well as representatives of the European University Association. Unfortunately, the official recommendations and approaches available today, including those developed in the countries stipulated in the recommendation, are very general and do not provide the opportunity to elaborate a formal university policy.

However, the university sees the challenge and shares the expert panel's attitude. That is why we believe recommendation №13 should have a suggestion status.

Response from Experts: No further comments. No changes regarding this recommendation.

Recommendation №14.

It is recommended that the university ensure undergraduate and graduate theses are checked for plagiarism.

The position of the University:

The Georgian Technical University's authorisation self-assessment report and the attached documentation prove that to protect academic integrity, the university employs Strikeplagiarism software, following the rules approved by the Academic Council. Strikeplagiarism software is characterised by its ease of use of the programme, fast operation, system security, and high inspection accuracy. By utilising the mentioned software, all undergraduate, master's, and doctoral theses are checked for plagiarism without exception. As a result, we believe recommendation №14 may not be necessary.

Considering the reasoned position of the university provided within the framework of the 2nd standard of authorization, we believe and contemplate it necessary that the expert panel discuss the issue of revising the assessment of this standard.

Response from Experts: During the visit and interaction with University's representatives, it was not clear whether checking for plagiarism is applied to undergraduate and graduate theses. No changes regarding this recommendation.

Standard III - evaluation according to the draft report: Complies with requirements.

Component 3.2.

Recommendation №15.

It is recommended to enhance communication skills in a foreign language for doctoral and master's programmes.

Recommendation №16.

It is recommended to strengthen the English proficiency test in the entrance exam, or conduct interviews, or introduce a thesis writing component as requirements.

The position of the University:

The prerequisite for admission to all master's and doctoral programmes operating at the university is the confirmation of a foreign language proficiency and, in most cases, English at least at the B2 level through a qualified process, which is expressed: 1. by presenting a relevant, recognized certificate, or 2. by the result of testing at the university's examination center. Master's and doctoral students intensively use English-language literature in the process of learning and research, as well as actively participate in English-language events organized by the university. Herein, during the visit of experts, while viewing the material base, all university students and the vast majority of staff, ensured communication and explanations on relevant issues with the international expert in English, without the services of an interpreter.

The university desires that the development of the quality of foreign language proficiency has a permanent character and employs all opportunities for that, including the creation and implementation of foreign language programmes, certificate courses for students and staff, etc. That is why we believe recommendations №15 and №16, issued within the framework of Component 3.2. should have the status of the suggestion.

[Response from Experts:](#) During the visit, few doctoral students had been struggling to talk English at conversational level. No changes regarding this recommendation

Standard IV - evaluation according to the draft report: Substantially in compliance with the requirements.

Component 4.1.

Recommendation №17.

It is recommended that the institution develops and implements an individual evaluation mechanism for administrative and support staff.

The position of the University:

Technical University of Georgia- "Historic verticals"

Recommendation №18.

It is recommended to set target benchmarks not only at faculty/school level but also at university level for all benchmarks required by the self-evaluation report template.

The position of the University:

In the 5th paragraph of the authorization self-assessment report, the Technical University of Georgia, according to the requested form, has presented the target benchmarks. In addition, we explain that at particular points there are actual quantitative indicators, which, in the opinion of the university, are acceptable and do not require changes. Accordingly, the university did not set new benchmarks in the mentioned points, and it was marked with a hyphen per existing practice.

[Response from Experts:](#) These benchmarks are useful to monitor progress, retention, dropouts and reduce the numbers of years of study. No changes regarding this recommendation.

Recommendation №19.

University must consider the optimization of the number of administrative/support staff and improve the ratio of administrative/support staff to the number of academic, scientific, and invited staff.

The position of the University:

Since 2020, the University has implemented a significant institutional reorganization in all areas of activity, and this process, along with other important tasks, included a decrease in the number of administrative and support staff. It should be noted that from this point of view, as of 2024, there is a total quantitative reduction of 24%. Accordingly, the University is sharing recommendation №19 as the suggestion.

[Response from Experts:](#) This recommendation is important for the smooth operation of different units. No changes regarding this recommendation.

Recommendation №20.

It is recommended that the Institution make the staff management policy and related documents easily accessible through its official website.

The position of the University:

The staff management policy document was available to the members of the expert panel through the documentation attached to the authorization application. In addition, it is undoubtedly confirmed that the university pays exceptional attention and consequently affirms the organization's official website improvement. During the visit, the experts had the opportunity to check the fully updated bilingual website of the university, which contains relevant information that meets current requirements. The process of filling and updating information is ongoing, and the university confirms the need for that. Accordingly, we believe recommendation №20, developed within Component 4.1 is the supplementary suggestion.

[Response from Experts:](#) Not all information was available in English, that's why such recommendation has been introduced. No changes regarding this recommendation

Component 4.2.

Recommendation №21.

It is recommended that the University develop regulatory documents that define the methodology of determining the number of academic, scientific, and invited staff in relation with academic programmes. Such documents must be easily accessible on university web-site.

The position of the University:

To ensure the programme sustainability, the HEI, when planning the number of the academic, scientific and invited staff, considers the number of existing and future students for each programme, the specifics of the programme and the best international practices; Before announcing the academic staff competitions, the related training courses are established for the current accredited educational programmes, from which the so-called Subject Groups formed. For each subject group, the annual academic workload (in hours) is set according to the current and forecast cohort of students. From the mentioned workload, the Academic Council and the Representative Council (Senate) determine the amount of the annual workload of the academic and invited staff. Based on the ratio of this workload to the workload of the academic staff of the subject group, the required number of professors, associate professors, assistant professors, assistants, and, if necessary, invited staff for a specific subject group is determined based on the characteristics of the subject group and relevant programmes. Accordingly, when determining the number of academic, scientific, and invited staff, the university relies on the successful experience accumulated over many years, and in the reporting period, there was no delay in this regard.

[Response from Experts: This information is important to ensure the sustainability and smooth operation of the Programmes. No changes regarding this recommendation.](#)

Standard V – evaluation according to the draft report: Substantially in compliance with the requirements.

Component 5.1.

Recommendation №22.

It is recommended that GTU ensure that international students are sufficiently informed about student self-government and have the opportunity to exercise their right to elect or be elected as a self-governance member.

The position of the University:

The Technical University of Georgia shares this recommendation in the suggestion capacity and intensively continues measures to increase international students' involvement in all components of university life.

It should be noted that international students are always involved in student projects.

Response from Experts: The expert panel further explains that the right of students to either elect or be elected as members of the student self-government is a significant right. International students must receive adequate information and support to exercise this right; otherwise, it will exist for them only in a formal sense. Furthermore, higher education institutions must ensure that student rights are equally accessible to both local and international students. No changes regarding this recommendation.

Component 5.2.

Recommendation №23.

It is recommended to formalise processes related to scholarships and develop a public accessible standard that ensures equal opportunities for both Georgian and international students.

The position of the University:

The issue of granting scholarships to students at the Technical University of Georgia, as well as in all state/budgetary organizations, is based on strictly established legal bases and procedures. The criteria according to which the scholarship is awarded are specific and unambiguous, and the process itself is characterized by a degree of transparency that excludes impartial decision-making. Students of all categories and levels who meet the scholarship criteria according to the legislation and the legal acts of the university participate in the competition for receiving the scholarship without any different treatment or attitude.

Response from Experts: For transparency in awarding scholarships and informing students, it is crucial that the institution has a publicly accessible document outlining specific scholarship criteria. During the visit, the panel requested a document outlining the criteria and procedure for awarding scholarships, but no such document was provided. As for international students, state scholarships do not apply to them, and regarding other scholarships offered by GTU, the panel was informed in various sessions (including by international students themselves) that international students do not have access to them. No changes regarding this recommendation.

Recommendation №24.

The University must employ a strategy to reduce the number of students suspended.

The position of the University:

We explain that the legal grounds for suspending student status are established by legislation. In particular, the legal grounds for suspending student status are:

- a) The failure to be subject to administrative (financial) or academic (educational) registration;
- b) Pregnancy, childbirth, child care or health deterioration;
- c) Studies at a higher educational institution of a foreign country, except for studies within an exchange educational program;
- d) Personal application (without indicating any reason);
- e) Bringing to criminal liability that excludes the possibility of a student's participation in the educational process;
- f) Call-up into compulsory military or military reserve service.

The majority of these grounds arise from the student's objective or subjective reasons, the consequences of which are beyond the university's ability.

In addition, the high rate of student suspension status is a common challenge in the Georgian higher education space and concerns all higher educational institutions.

Accordingly, the efficient response to the mentioned challenge is considered a category of issues to be solved with a complex approach. In line with communication, micro-level promotion, additional, including individual consultations and offers, the issue of adapting the legislation is also included, as well as the statute of limitation on suspension of status. Moreover, it should be taken into account that concerning students whose status has been suspended due to financial debt, the state has made an unprecedented decision, and all such students across Georgia were freed from the financial debt problem in 2023. Considering all of this and the flexible conditions of tuition fee payment in the university, we believe it is unjustified to develop a similar content-oriented recommendation for the university.

[Response from Experts: The University must adopt a policy to reduce the suspension rates. No changes regarding this recommendation.](#)

Standard VI - evaluation according to the draft report: Substantially in compliance with the requirements.

Component 6.1.

Recommendation №25.

It is recommended to provide mentoring support and training to the PhD supervisors.

The position of the University:

The legal acts of the Technical University of Georgia, including the provision on doctoral studies, establish such requirements for the scientific supervisor of the doctoral student, which ensures a high standard of the scientific supervisor's qualification, level of expertise, recognition of his activity and willingness in terms of scientific productivity. Therefore, it is

necessary to divide the recommendation into two parts. In the first part, which concerns mentoring support for scientific supervisors, we believe that it does not express the needs of the university and therefore we do not share it. As for the second part - training of scientific supervisors, the university's authorization self-assessment report and its appendices widely present information about the implemented and current measures, as well as the leading special structural unit implementing these measures, which intensively cooperates with the university's Quality Assurance Service and the Human Capital Management Department.

[Response from Experts: It is not clear whether training is provided for the PhD supervision. No changes regarding this recommendation](#)

Recommendation №26.

It is recommended to revise the scholarship fees for the PhD students.

The position of the University:

The basis of the mentioned recommendation can be read on page 52 of the Georgian-language draft report of the expert panel, where the following is recorded: "During the entire interview, the experts realized that the doctoral students work in resemblance with their studies on the doctoral programme. It is very difficult. This is evident in the large number of programme PhD students who have their status suspended. PhD students do not appear to be working full-time on research projects. That is due to the insufficient amount of funds for research to provide PhD students by their families".

The university considers that the mentioned record and the recommendation issued on its basis do not correspond to the objective reality not only in the Technical University of Georgia but also in the Georgian higher education space.

[Response from Experts: The recommendation has been moved to suggestion.](#)

Recommendation №27.

It is recommended to revisit the English exam to assess the level of the PhD students.

The position of the University:

All accredited doctoral educational programmes operating at the Technical University of Georgia require, as a precondition for admission to the programme, proof of English language proficiency at least B2 level through a qualified process: 1. by presenting a relevant, recognized

certificate, or 2. by the result of testing at the university's examination center, or 3. by confirming of completion the first and/or second level higher education in English. This precondition, both from the legal and content points of view, has an imperative character, and therefore, no exceptions are allowed. Accordingly, the university does not share the recommendation issued within component 6.1.

[Response from Experts:](#) The English level for few of the PhD students was not appropriate during the interviews at conversational level. No changes regarding this recommendation

Recommendation №28.

It is recommended to establish multi-disciplinary research activities through the collaboration among different Faculties and Research Centres.

The position of the University:

There is a valuable experience of scientific cooperation between faculties and scientific institutes in the university. At the current stage, a collaborative scientific programme is being implemented in many directions with the participation of scientists, professors, and doctoral students, both in specific fields and interdisciplinary directions. In addition, interdisciplinary research is fully supported and encouraged by several legal acts of the university (strategy documents, Strategic Action Plan, memoranda and agreements for participation in international collaborations, allocated material, and financial resources). Such cooperation is carried out not only at the university level but also in international large-scale scientific collaborations, with multidisciplinary participation from the Technical University side.

[Response from Experts:](#) There was not enough evidence how multi-disciplinary research is carried out. No changes regarding this recommendation.

Recommendation №29.

It is recommended to increase substantially the number of publications and contributions in high-quality journals (Impact Factor larger than one, Q1 or Q2 according to “scimago” journal classification).

The position of the University:

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Recommendation №30.

It is recommended that all the works performed by the doctoral students (not only the completed dissertation) to be checked for plagiarism (journal manuscripts, colloquiums, thematic seminars), which will help to develop their skills;

The position of the University:

As stated in the draft report and proven by factual circumstances, all dissertations completed at the university undergo a test of academic integrity before defense, through a qualified process. In addition, according to the current legal act, scientific articles prepared in the research process, which are published in the editions of the "Publishing House" of the university, are mandatorily checked by a plagiarism detection programme, and the conformity of the coincidence coefficient or vice versa is determined. This process, ensured by appropriate administrative and financial resources, efficiently verifies the academic integrity fact of the doctoral candidate. As a result, the system excludes the defense of the thesis and the awarding of an academic degree to the doctoral candidate in the event of academic integrity violation. Accordingly, in the conditions of the proven achievement of the goal, we believe that the expenditure of considerable additional administrative and financial resources by the university in this direction will be an unjustified decision from the point of view of efficiency and practicality.

[Response from Experts: It is not evident whether manuscripts submitted for publication to international journals are subject to plagiarism check. No changes regarding this recommendation.](#)

Recommendation №31.

It is recommended to clarify the prerequisites for the defence of a PhD thesis, including the requirement of having a scientific article published in a journal indexed by the Web of Science or Scopus databases, or, for those in the humanities and social sciences, in the ERIH Plus database.

Recommendation №32.

It is recommended to improve the procedure for appointing a supervisor for a doctoral student. The appointed professor must have conducted relevant scientific activities related to the thesis topic in the last three years, with publications in journals indexed by the Web of Science or Scopus databases, or, for those in the humanities and social sciences, in the ERIH Plus database.

The position of the University:

The Technical University of Georgia met the requirements of recognized good practice with the prerequisites for the defense of the doctoral thesis and the procedure for the appointment of the scientific supervisor, and as a result, successfully implemented the accreditation of the

doctoral level programmes at the national level. The content of the recommendation is derived from the new standard for Doctoral studies, which was approved after the visit of experts and, accordingly, after the authorization application, and this request is addressed not only to the technical university but also to all higher educational institutions implementing the doctoral educational programmes. Accordingly, the recommendation of identical content has the character of an imperative request, and it is not appropriate to attribute it to the Technical University of Georgia. However, the University has repeatedly confirmed and remains committed to ensuring adherence to the approved standard without any additional recommendation(s).

[Response from Experts:](#) This recommendation is based on the average research output from the academic staff within the reporting period. No changes regarding this recommendation.

Component 6.2.

Recommendation №33.

It is recommended to set-up Google Scholar profiles for both academic staff and PhD students.

The position of the University:

It is a proven fact that all representatives of the academic staff of the Technical University of Georgia have created Google Scholar profiles.

[Response from Experts:](#) The recommendation has been moved to suggestion

Recommendation №34.

The University must develop an effective strategy and incentive system for research support towards internationalisation.

The position of the University:

The indicators of research internationalization undoubtedly indicate the effectiveness and efficiency of the strategy and support in the university. In particular, our university is represented in all international scientific collaborations. In addition, in the wake of capacity building, considering the interests of the Technical University of Georgia, we will share the recommendation with the status of the suggestion.

[Response from Experts:](#) Internationalization and interactions with foreign institutions are important to improve the quality at different levels. No changes regarding this recommendation.

Component 6.3.

Recommendation №35.

The University must use either (<https://www.scopus.com/search>) or Scimago (<https://www.scimagojr.com/>) to evaluate the quality of the research outcomes in international journals.

The position of the University:

The university's authorization self-assessment report and the attached document contain information and a regulatory legal act on the scientific research activities evaluation.

According to the "Rules for evaluating the scientific and research activity of the scientific and research unit of the Technical University of Georgia", not only Scopus and Scimago but also scientific journals indexed in the Copernicus, Clarivate Analytics, Web of Science, Scopus, Social Sciences Citation Index, Arts and Humanities Citation Index, ERIH Plus, Research Gate, SCImago Journal Rank are used for the quality assessment of research results. Accordingly, there is no need for recommendation №35.

[Response from the Experts: The recommendation has been moved to suggestion.](#)

Recommendation №36.

The University must use metrics such as citation counts, FWCI, i10 to benchmark academic staff and researchers' performance.

The position of the University:

The Technical University of Georgia utilizes domestic and internationally recognized tools to evaluate the productivity of academic, invited, and research staff. In recent years, under the leadership of the Scientific Department of STU, several measures and reforms have been carried out to increase visibility in international databases and place publications in high-ranking journals. As a result, the indices reflecting the productivity of academic and scientific staff (citations, H, etc.) have also increased sharply. Today, the university, through the world's leading scientific bibliometric databases (SCOPUS, GoogleScholar, WOS), calculates the citations of academic and scientific staff and takes these indicators into account when participating in various domestic and international competitions. However, it fully shares the recommendation that in future academic and scientific competitions, the usage of such measurement metrics as FWCI, i10, and Altmetrics, have to be used to consider the impact of the scientific result on the relevant field during the evaluation.

[Response from Experts: No further comments. No changes regarding this recommendation.](#)

Recommendation №37.

It is recommended that the evaluation analysis of the research quality efficiency to be used by the GTU to plan a new research strategy for further development.

The position of the University:

The internal evaluation system of the scientific and research activities operating at the university includes quantitative and qualitative evaluation criteria, and reporting, analysis, evaluation, and feedback mechanisms, with qualified procedures and full infrastructural support, provide efficiency evaluation for reflecting the results in the research strategy. In addition, the university participates in the external assessment organized and carried out by the National Academy of Sciences of Georgia, the results of which are reviewed and analyzed annually for further development. We believe that this system ensures the permanent development of the university's scientific and research process and environment.

[Response from Experts: The research efficiency benchmarks \(comparisons at both National and international levels\) are not evident. No changes regarding this recommendation.](#)

Standard VII – evaluation according to the draft report: Substantially in compliance with the requirements.

Component 7.1.

Recommendation №38.

GTU must prepare a detailed refurbishment plan (maximum three years) for the all of the institution's buildings and related infrastructure (laboratories, sanitary nodes; fire-fighting equipment; environment adapted for people with special needs; catering facilities) and determine the estimated budget.

The position of the University:

Every year, the university takes essential steps in developing and strengthening university buildings and related infrastructure. Accordingly, the Technical University of Georgia shares this recommendation.

[Response from Experts: Lack of detailed plan has been provided. No changes regarding this recommendation.](#)

Recommendation №39.

The University must provide escape plans for each building with designed signs.

The position of the University:

In all university buildings, qualified evacuation plans of the relevant building are posted in several specially selected visible places on each floor. This factual circumstance was confirmed during the visit of the authorization expert panel to the university. In addition, in all laboratories, as well as in buildings, there are special information signs: the presence of an electric node, an exit sign, no smoking, video surveillance, etc.

[Response from Experts:](#) During the visit, escape plans were not evident in all buildings. No changes regarding this recommendation.

Recommendation №40.

The University must allocate a Fire Warden in each building.

[Response from Experts:](#) No comments provided. No changes regarding this recommendation.

Recommendation №41.

The University must introduce a training process for both academic staff and students in health and safety procedures.

The position of the University:

It is evidenced that university buildings meet established fire safety standards. In addition, the responsibility for security in each building rests with the structural unit of the university - the Security and Safety Service. Employees of this service, in all buildings, carry out control 24/7 according to the territories assigned to them. Employees of the same service have undergone special training and are responsible for fire safety. This obligation is also confirmed by Article 3 of the "Regulations of the Safety and Security Department of the Technical University of Georgia".

The Department of Safety and Security is obliged to ensure security in the entire territory of the university during educational and non-academic processes at the university; to control the process of students entering the university via student cards; to control the ongoing processes in the building (except for the auditoriums) by means of surveillance cameras in compliance with the legislation; to ensure the protection of material values, inventory and other auxiliary means of the university; to facilitate the safe conduct of educational and non-educational

processes; not to allow strangers on the territory of the university; apply appropriate measures against the violator, if he does not comply with the requirements stipulated by the university statutes and other legal acts; to be continuously in the guard building, to control the work of the building, electrical protection and fire alarm, to protect the property of the respective building from damage, robbery, and fire; to prevent any violation, as well as the introduction of alcoholic beverages into the university buildings, gambling, smoking, bringing in and taking out of any inventory or things without the permission of the authorized supervisor; do not allow the main and spare exits to be obstructed; to carry out the protection of the material and technical base of the university with fire and security alarms, video surveillance, using other forms and methods of protection; to report fire or other natural events and violations to the police.

In addition to the above, within the structure of the university's structural unit - Infrastructure Management, Labor Safety, and Logistics Service, the Labor Safety Department operates, the main functions of which are ensuring the fulfillment of the requirements stipulated by the legislation on labor safety; taking care of the labor safety of the employees, creating a safe working environment and setting appropriate standards of behavior for them; planning preventive measures for labor safety and ensuring the implementation of these measures; development of fire safety and evacuation plans; training university employees in issues of labor safety and health protection, providing them with relevant information and consulting; Ensuring the fulfillment of other obligations established by the legislation on labor safety within the scope of competence.

Accordingly, we believe there is no need for recommendations №40 and №41.

[Response from Experts: After reading the internal report, there is no process to assess the level of understanding health and safety procedures from staff. No changes regarding this recommendation.](#)

Component 7.2.

Recommendation №42.

The Institution must subscribe to IEEE Xplore.

The position of the University:

The university's accreditation self-assessment report outlines and provides evidence that students and staff have access to the products, and scientific databases offered by Elsevier: ScienceDirect, Scopus, Heinonline, Cambridge University Press, Royal Society Publishing – journals, IMF eLibrary, IMechE Journals, Openedition Journals, Mathematical Sciences

Publishers, SAGE Journals, Edward Elgar Publishing, Duke University Press, European Respiratory Journal, The Company of Biologists' Journals. Based on the above, the University shares recommendation №42 as the suggestion.

[Response from Experts:](#) The report has highlighted the importance to IEEE Xplore. No changes regarding this recommendation.

Recommendation №43.

The Library must provide rooms for group-based projects.

The position of the University:

The Central Library named after Niko Muskhelishvili of the Technical University of Georgia is distinguished by its unique resources and history in the Georgian educational space and is not only the most important structural unit carrying the classic library function but also hosts educational, scientific, and creative events every day. The library includes several halls and workrooms of various sizes and appropriate equipment, some of which the experts had the opportunity to see physically during the visit. However, during the visit, a certain part of the library, which also includes a large conference hall, was under renovation and one representative of the expert panel inspected the ongoing works. In addition, faculty libraries with appropriate material resources, including relevant rooms, are functioning at all university faculties. Based on the above, the university library has not only working rooms dedicated to "group projects", but also halls necessary for hosting all kinds of events, including a conference hall.

[Response from Experts:](#) During the visit, it was evident that there are not enough facilities to support group-based activities. No changes regarding this recommendation.

Component 7.3.

Recommendation №44.

It is recommended to adopt two-way factor authentication.

The position of the University:

GTU has already carried out technical work to introduce two-factor authentication. Authentication systems have already been implemented on all critical services, such as e-

learning system (elearning.gtu.ge), learning process management system (vici.gtu.ge), e-mail, etc. At this point, users could individually activate this mode.

Considering the given recommendation, the mandatory two-factor authentication mode will be activated.

[Response from Experts: No changes regarding this recommendation.](#)

Recommendation №45.

It is recommended to replace PCs with outdated cyber-risk Operating System.

The position of the University:

The Technical University of Georgia intensively updates its computer equipment and, for this purpose, annually participates in the consolidated state procurement tender. The university has identified a small number of remaining computers whose technical characteristics cannot ensure work with a modern operating system. As mentioned, this challenge is not ignored and the university is working intensively on this issue. Accordingly, recommendation №45 is shared as an additional suggestion.

[Response from Experts: This must be a recommendation due to severe security risks. No changes regarding this recommendation.](#)

Recommendation №46.

It is recommended to install anti-malware software.

The position of the University:

Currently, the university employs several combined systems to prevent attacks on computer networks:

1. Preparation of so-called access lists (ACL), which regulate access to GTU management services, both from the Internet and internal networks.
2. Anti-virus system - "Bitdefender" is installed in the computer network of the technical university, which provides detection, analysis, and neutralization of malicious programmes by means of a centralized software controller.

3. Virtual local networks are implemented in the GTU, thus regulating the transfer of traffic between different VLANs.

4. GTU is involved in the Cyber Incident Response Management Team (CERT Georgia) which provides some prevention of DDoS attacks and awareness and response to other cyber incidents.

5. GTU has prepared tender technical documentation for the purchase of a new generation firewall, which will significantly strengthen cyber security and incident response time shortly.

[Response from Experts: All the above, do not prevent malware type of attacks. No changes regarding this recommendation.](#)

Component 7.4.

Recommendation №47.

To prepare a strategic/action plan for finding financial resources as determined by the corresponding budget for the rehabilitation/renovation plan of buildings, relevant infrastructure, and laboratories, it is recommended to revise the financial plan and use KPIs to assess the effectiveness.

The position of the University:

Within the framework of recommendation №38, we noted that the university annually carries out essential tasks in the direction of improvement and strengthening buildings and infrastructure, and shares the need to continue intensive work in this direction. However, we disagree with the recommendation to revise the financial plan, because the university implements infrastructure projects under the conditions of efficient planning of financial resources. For this purpose, it uses not only the income provided by the budget of the organization and state support but also the financial resources accumulated by the university Development Fund and the support of graduates.

Considering all the above, the Technical University of Georgia believes that the number of recommendations will be significantly reduced in the final version of the authorization expert panel report. Accordingly, the evaluations of the university's compliance with the standards will be modified.

[Response from Experts: Thanks for the responses provided.](#)