



საქართველოს ტექნიკური უნივერსიტეტი
GEORGIAN TECHNICAL UNIVERSITY

Approved by
Academic Board of GTU
28 of June, 2013
Order № 942

Modified by
Academic Board of GTU
18 of June, 2018
Order № 01-05-04/136

Doctorate Educational Program

Title of the program

Military Engineering

Faculty

Civil Engineering

Program Supervisor / Supervisors

Professor, Doctor of military science, Doctor of Technical science, Major-General Elguja Medzmariashvili

Qualification to award

Doctor of military science

Will be awarded in case of passing not less than 180 credits of an educational program.

The language of teaching

Georgian

Prerequisite to access the program

Master's degree or equivalent degree diploma in Engineering, Head of Armed Forces and high degree officers, as well as officers whose service functions include military engineering.

Considering: Labor professional activities; Existence of scientific publications; Participation in scientific conferences; Other documents and materials related to training / research and professional activities (certificates, diplomas, patents, etc.);

Those who wish to enroll in the program must submit an international certificate (B2 level) certifying the knowledge of English, German, French or Russian language, or to interview with the Faculty Temporary Commission, where one of the conditions is to read the text in English, German, French or Russian and translate into military theory, Military engineering or Military Technical Field. The applicant, who has received education in any of the above foreign languages, is not required to submit a document certifying the knowledge of language.

Compliance with the Doctorate Program, Candidate shall be established by the Faculty Temporary Commission in accordance with GTU.

Please see it in the link:

http://gtu.ge/Learning/pdf/doqtoranturis_debuleba_29.05.18.pdf

Description of the program

The doctorate program includes 180 credits - 60 credits for one academic year and 30 credits in the semester; The program is drawn up with ECTS system, 1 credit is equal to 25 hours, which means the contact and independent work hours. The credit distribution is presented in the program curriculum.

Teaching is semester; The academic year consists of two semesters. 15 Weeks of Study (Auditory Studies) and 4 - Sessions (Final and Additional Examinations) within one semester.

Description of the study and research components:

The study component of Doctoral Program includes 60 credits.

The Doctoral Program **Education Component aims** to provide doctoral and methodological skills, facilitates doctoral studies in the field of dissertation and preparing for future pedagogical and scientific activities.

The training component of the program includes nine training courses and two thematic seminars:

- 1) Scientific Communication Techniques A – 4 credits;
- 2) Learning Methods and Education Management – 6 credits;
- 3) structure of military science, essence and research methods – 5 credits;
- 4) Military Terminology – 5 credits;
- 5) Training course for the military – 5 credits;
- 6) Defense environment and armed battle – 5 credits;
- 7) Engineering preparedness of territory for defence and military-engineering maintenance of combat operations and activities 5 credits;
- 8) Thematic Seminar-1 – 10 credits;
- 9) Thematic Seminar-2 – 15 credits.

The main goal of the thematic seminar (s) is to provide doctorate: knowledge based on the latest achievements of the specific field / subdivision within the relevant research community; Develop the ability to understand the problematic issues, correctly and efficiently solving the problem, analyze the new research and analytical approaches, criticize the issue and innovative methods, as well as in the thematic discussions.

Research Components for Doctoral Education Program includes 120 credits.

The research component of Doctorate Educational Program aims to deepen the practical skills of independent research of scientific research, forming and developing professional research culture. Research, quality research, sustainability and credibility of scientific research results, financial indicators (in case of existence), methods used (methodology), theoretical / practical value of the thesis, degree of dissertation and others.

Compulsory Elements of the Doctorate Program Research Component:

Theoretical / Experimental Survey / Colloquium -1 - 30 credits;

Theoretical / Experimental Research / Colloquium -2 - 30 credits;

Preparation and protection of the dissertation work - 60 credits.

The principle of colloquium is to systemize the doctorate knowledge, present / presentation of the work, presenting the doctorate's creative thinking, the ability to communicate with the scientific community. Colloquium presents the presentation of the doctoral material related to the dissertation topic / part thereof. The thesis is to be a part of the thesis.

Completion and protection of the dissertation (preparation and protection of the dissertation thesis) is a major part of the research component. The completed dissertation should be the result of independent doctoral research work. It should reflect the scientifically justified new results of the theoretical / experimental research conducted by the doctorate and / or solve the acute scientific problem. It should be characterized by scientific innovation and contributing to the field development. The paper should include the scientific level of dissertation research, research quality, sustainability and reliability of scientific research results, financial indicators (if any), methods used (methodology), theoretical / practical value of the work.

Description of Assessment of study and research components:

Assessment of the training component:

Assessment of the level of achievement of the PhD student's learning outcomes in each study component of the program includes interim and final assessment. Maximum score of the intermediate score is 60, and the maximum score of the final exam - 40.

Intermediate appraisal components are: evaluation of mid-stage exam and current activity;

One semester exam is conducted during the semester. It is a necessary component of interim assessment. Maximum score of mid-semester exam is 30. Minimum positive score in doctorate is - 15 points.

The methods of evaluating the current activity, form, content, minimum and maximum scores, criteria and scales of their conduct are determined by the syllabus author and described in the course. The maximum score of current activity is 30, minimum net positive assessment - 15 points.

The right to pass the final examination is given to the PhD student who has fully fulfilled the prerequisites provided by the educational program and the margin of minimum competence (30 points) in the interim assessments. Minimum positive assessment of the final exam is 20 points.

Student knowledge assessment system include:

Five positive gradings:

Assessment of the training component:

(A) - Excellent - the rating of 91-100 points;

(B) – Very good - - the rating of 81-90 points

(C) - Good - the rating of 71-80 points

(D) - Satisfactory - the rating of 61-70 points

(E) - Enough - the rating of 51-60 points

Negative grading:

(FX) - Did not pass - 41-50 points of rating, which means that the student needs more work to pass and is given the right to take the exam once more with independent work;

(F) – Failed - 40 points and less, which means that the work carried out by the student is not enough and he/she has to learn the subject from the beginning.

In case of adoption of FX in the educational component of the educational program, the additional exam will be appointed no less than 5 days after the conclusion of the final exam results. This obligation does not apply to the dissertation, master's project / work, creative / performing work or other scientific project / work.

The number of points received in the final assessment is not added to the assessment received by the student.

The additional assessment is the final assessment and will be reflected in the final assessment of the educational program component.

In case of receiving 0-50 points in the final evaluation of the academic component, or if the student fails to overcome the minimum competency level for the final / extra test, the student will give an assessment F-0 score.

Assessment of thematic seminars:

To obtain the right to conduct a seminar, PhD student will present a seminar on the seminar in the 7th and 14th weeks of the semester to the head of the seminar on the basis of 4 components, evaluating the contents of the seminar. The work is rated at a maximum of 30 points. Evaluation Scaled Score (S) is obtained by the formula $S = 1.5 \times M$ where M is the total score for all four components evaluation. Intermediate assessment criteria of the thematic seminar 1. Access to the required information / maximum evaluation - 5 points; 2. Identification of the problem / maximum assessment - 5 points; 3. Efficiency / Maximum Assessment of Information - 5 points; 4. System of Research Methods / Maximum Assessment - 5 points.

For the purpose of final assessment, the thematic seminars will be handed over to the Academic Department by the intermediate assessment of the head, until the completion of the corresponding training semester (not later than the 15th week of the week).

Each member of the Commission shall evaluate participation in the Seminar, its public presentation and discussion, with a maximum of 40 points based on 4 components. The maximum evaluation of thematic seminars is 40 points. The final score is determined by the average arithmetic of scores written by all members of the commission (the total number of scores calculated on the number of appraisers divided). Scoring scores (S) of evaluation will be obtained with the formula $S = 2 \times M$, where M is the total score for all four components evaluation. The final evaluation criteria of the thematic seminar are: 1. Critical evaluation of information and its sources, maximum score - 5 points; 2. Conclusions and Results, Maximum Assessment - 5 Points; 3. Quality of the survey conducted, maximum score - 5 points; 4. Ability to present topic, maximum score - 5 points. 2.4.15. Each thematic seminar of doctorate is rated at maximum 100 points, two intermediate (30 + 30) and final (40) points.

In case of positive evaluation of the seminar 1 (51 and more points), PhD student continues to study.

In case of negative evaluation of thematic seminar-1 (less than 51 points), the doctor will reiterate the work according to the existing rule.

The thematic Seminar 2 is the prerequisite to go through thematic seminar 1.

Assessment of research component:

Colloquium evaluation:

The dean is appointed by a chairperson of the academic department, comprising a committee comprising 5-7 members in which the academic personnel of the field should be included. The composition of the Commission is approved by the Order of the Order. The work of the Commission should also be attended by the head of the PhD student. The PhD student is at the Commission on the results obtained at the given stage;

Each member of the commission estimates the colony based on 6 criteria.

The colloquial assessment criteria are: 1. Comparison of the methods and direction of the research conducted at the given stage with the problem - maximum score 5 points; 2. Quality of research conducted at the given stage - maximum score of 5 points; 3. Conclusion on the basis of the research conducted at the given stage - maximum score of 5 points; 4. Determination of the further direction of the survey - maximum score of 5 points; 5. Labor analysis prepared for published or publication - 11 Maximum Assessment 5 points; 6. Ability to present topic - maximum score 5 points. The work is rated at a maximum of 100 points. Assessment Scaled Score (S) is obtained by the formula $S = 3.33 \times M$, where M is the total score for all six components evaluation (Appendix 9).

In case of each colloquy positive evaluation (51 and more points), the doctoral student continues to study.

In case of colloquial negative assessment (less than 51 points), the doctor will reiterate the work according to the existing rule.

Assessment of preparation and protection of the dissertation work:

Doctorate Dissertation Thesis can be deduced from the Dissertation Board (including 30% of the Dissertation Board) or University Dissertation Board with 7-9 representatives of the relevant PhD program.

The assessments are made according to the average arithmetic of points awarded by the respective Collegiate / University Dissertation Board members, in accordance with the following criteria: Actuality of the Dissertation Community - Rate to 15 Points; News of the dissertation thesis - evaluation to 18 points; Theoretical / practical value of the dissertation thesis - evaluation to 18 points; Presentation of the problem in the dissertation work and its solution - evaluation to 25 points; Answers to questions - up to 18 points; • Visual performance of the material - up to 6 points.

For detailed information on the abovementioned issues please refer to the Doctor of Doctorate in the following address:

http://gtu.ge/Study-Dep/Files/Pdf/doqt_debuleba_%20290518_SD.pdf

Also in the GTU process instruction in the following email address:

http://gtu.ge/Study-Dep/Files/Pdf/stu_saswav_proc_mart_150518_SD.PDF

The purpose of the program

The aim of the project is to prepare a qualified military-engineer specialist and researcher in the field of military science, military expertise and defense, who has knowledge about military science and its research methods, has been acquainted with the Georgian military terminology comprising NATO military terminology base on this knowledge about armed battle and defensive environment which includes: preraping military theater for defense; The essence of the war; Structure of the Forms and Formations of Armed Forces; Military strategy, operational art and tactics; Armed fightings on land, sea, air and space; Armament systems; Security priorities of Georgia's type states in military art; Asymmetric and hybrid wars.

Te main purpose of the program is to prepare military engineering researcher, the course is enhanced in the field of military engineering, which includes: engineering of Georgian territory for defense; Consideration of the activities of combat actions and battles in different types of operations, in different environmental and different climatic conditions; To achieve these factors, bringing their own forces, antagonism of the opposing forces and engineering techniques, personal composition and population engineering.

Learning outcomes / competences (general and sectoral)

Knowledge and understanding - Doctor of military science in military engineering field has a **knowledge**:

- Of military science and its methods of knowledge that has been strengthened by the Georgian military terminology combined with the concepts and definitions of NATO and Georgian Military Terminology.
- Of the defense environment and armed struggle that will examine: the essence of the war; Military strategy, operational art and tactics; The structure of military units and the armed forces; Military operation; Air-space military complexes and their functions; Weapons of mass destruction; General armament; Different use of armed forces; Emergencies and partisan movements;
- Engineering assurance tasks with an innovative decision to carry out the battlefield and include engineering actions in any environment, at any time of year and night: in snow, sunny weather, fog and low temperatures and atmospheric pressure conditions; In the mountains, in the forest, in the swampy

places, in the jungles, in the slopes, in the desert, in the sandy and unjustified relief conditions;

Has an understanding of:

- The defense for engineering training, combat actions and operations of the military-engineering software industry, which includes: the territory - the environment, transport and communication infrastructure for self-defense training in structural engineering model of the opponent's attack, the single - Civil, and military engineering support to increase the combat effectiveness of the actions and operations of the military engineering software; Exploring the activities of combat operations and fighting techniques in different types of operations, in different environments and climatic conditions, when the mobility of their forces must be achieved, the resistance of the opposing forces and the disguise of the combat equipment, personal composition and population by engineering methods;
- Priorities of the States with the type of military security system in the modern military art and the necessity of transformation of existing concepts.

Ability to use knowledge in practice - Ability of:

- Planning and conducting independently on operational-strategic, operational and tactical levels of engineering assurance tasks in combat operations and battles, attack and defense operations;
- Mobility of the decision making, mobility of their own forces, and survival techniques for engineering procedures to be carried out in any environment at any given time, at different times of the year and at specific intervals of day-night, due to complex climatic conditions;
- Implementation of engineering preparation procedures for defense of the territory;
- In the planning, implementation and supervision of military-engineering field procedures in practice, realization of issues of military sector;
- Using analytical methods and approaches of innovative survey of martial, extraordinary and extreme environment for the readiness of the defense of Georgia and the unified military-engineering provision;

Ability of conclusion:

- Ability to develop / analyze, synthesize and evaluate the new methodology of military engineering as a component of military science and art, operational and combat asset approaches;
- Critical analysis of the accurate and relevant terms of the event in military engineering and its neighboring fields, as well as the ability to make the right decision independent of solving the problem;
- Critical analysis, synthesis and evaluation of new, complex and contradictory ideas and approaches of current problems in civil engineering and military engineering infrastructure, particularly military operations and operations;
- Ability to analyze and evaluate the optimal utilization of civil engineering engineering objects and identified deficiencies as a result of combat operations on the territory of the country and its neighboring areas;
- Ability to evaluate decision-making and critical analysis based on conflicting approaches to solving problems in militant and emergencies.

Ability to Communicate:

- Ability to communicate and communicate with knowledge of knowledge of new knowledge using technical means in extreme and nonstandard situations with ability to communicate and communicate with civil society representatives, individual organizations and companies, civilians, individuals and territorial security With the military personnel for the efficient use of engineering infrastructure to solve the problem it faces;
- Military expertise, in the international scientific community, in foreign language, in the subjective polemics and the ability to express their knowledge with military terminology, reasonably,
- For countries with the type of security system of Georgia, in determining the characteristics of the military strategy, the ability to engage them in the thematic polemics of the country.
- Ability to formulate and manage the methods used in innovative surveys and the latest achievements.

Ability to learn :

- Ability to introduce new ideas and ideas based on the latest scientific achievements in the study of military science, and the ability to introduce command-staff and tactical learning methods in teaching process;
- willingness to develop the new term processes of the terminology and promote their professional speech in their establishment;
- Ability to develop new ideas or processes of development, including research process, based on knowledge based on the new achievements of strategy, operational arts and tactics interconnections;
- Ability to study and further develop these processes based on concrete achievements and innovative changes in the future of the country's training and the future of the country.

Values :

- The military arm of the knowledge obtained from the values of the ability of damkvidrebita to ensure the public safety and welfare, as the military-engineering sector includes the area of the buildings, roads, bridges, tunnels, cultural heritage sites and monasteries, protection firing affect;
- Ability to develop and realize innovative methods for the defense of the structure, the essence and research methods of military science, as one of the most important components of values;
- Assigns professional and ethical responsibilities of the military engineer to the ability to elaborate innovative methods for assessing the dependency of the military terminology as a unique model of modernity and assessing the attitudes of others and establishing new values;
- Ability to develop innovative methods for research, realization, and realization of the ways of establishing values in the field of engineering preparation for the defense of the territory of defense.

Methods of achieving learning outcomes (teaching and learning)

Lecture workshop (group work) practical Laboratorial
 Scientific-thematic seminar Independent work Research component Consultation Design of
 doctoral thesis Doctoral thesis

- **Problem solving method**, in which students are aware of their thoughts and opinions to solve the problem. This method has a special effect on teaching. Students have to learn from the various fields of discussion during the discussion and use it complexly to solve the problem. During the method, new questions and opinions will arise.
- **The written work method**, which implies the following activities: making extensions and records, consolidating material, composing, abstract or essay performance, etc.
- **Practical methods** – Combine all the forms of teaching that make the student practical skills, where the student performs independently on the basis of acquired knowledge.
- **Discussion / debate** – one of the most common methods of interactive teaching. Discussion process increases the quality and activity of student engagement. Discussion can be raised into debates. This process is not limited to the questions asked by the professor only. This method develops the ability of the student to argue and argue for his opinion.
- **Problem Based Learning (PBL)**– a learning method that uses the problem of new knowledge and integration process.
- **Strategic training** at which time the planning is planned so that it is tailored to needs and requirements.
- **The Euristic method** is based on the gradual solution of the problem posed to students. This task is carried out through the independence of the facts of the study process and the linkage between them.
- **Case study** – Professor discusses specific cases with lecture students.
- **Brainstorming** – This method involves maximizing more about a particular issue / problem within a specific topic, and it is desirable to promote radically different, opinion, idea and expression. This method promotes the development of the creative approach to the problem. This method is effective in the existence of a large number of students and consists of several main stages:
 - Determine the problem / problem in creative angle.
 - In a certain period of time, the bookmarking (mainly on the board) without the criticism of ideas from the audience.
 - Excluding those ideas that are most relevant to the issue.
 - Determination of assessment criteria to determine the conclusion of the idea with the aim of the research.
 - Assessment of selected ideas with predetermined criteria.
 - Identification of the highest assessment as the best means of solving the problem.
- **Demonstration Method** – This method involves visualisation of the information. It is quite effective in terms of achieving the result. In many cases it is best to provide students with audio and visual simultaneously. The study material can be demonstrated by both the teacher and the student. This method helps us to visualize the different levels of learning material, to specify what students will have to do independently; At the same time, this strategy will visually represent the essence of the problem / problem.

Induction, deduction, analysis and synthesis

- **The induction method** of teaching determines the form of any subject knowledge when the process of thinking is directed towards the generalization, from the facts, from the facts, in the process of conveying the material from the concrete to general.
- **Deduction method** of learning defines the form of transmitting any subject knowledge that is based on

knowledge from the general to concrete.

- **Analysis method** in the learning process helps to disseminate the study material into one of the whole parts, thus simplifying the detailed coverage of the individual issues within the difficult problem.
- **The method of synthesis** involves the reversal procedure, ie, the creation of one whole group by grouping individual issues. This method promotes the development of the problem as a whole.
- **Explanatory method** – based on the discussion on the issue. The professor conducts a concrete example of the material, which is discussed in detail within the given topic.
- **Action-oriented teaching** – requires active involvement of the professor and student in the teaching process, where the practical interpretation of the theoretical material is taken into consideration.

Student knowledge assessment system

Grading system is based on a 100-point scale.

Assessment of the training component:

Positive grades:

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

Negative grades:

- (FX) - Did not pass - 41-50 points of rating, which means that the student needs more work to pass and is given the right to take the exam once more with independent work;
- (F) – Failed - 40 points and less, which means that the work carried out by the student is not enough and he/she has to learn the subject from the beginning.

Assessment of doctoral thesis:

- A. Great (summa cum laude) - excellent work;
- B. Very good (magna cum laude) - the outcome that exceeds the requirements above;
- C. Good (cum laude) - the outcome that exceeds the requirements set;
- D. Medium (bene) - medium-level work that satisfies the basic requirements set;
- E. Satisfying (rite) - the outcome, which, despite the shortcomings
- F. The requirements still satisfy;
- G. Unsatisfying (insufficient) - work of unsatisfactory level which does not meet the requirements set out due to significant shortcomings in it;
- H. Completely unsatisfying (Sub-omni canone) - the outcome that does not satisfy the requirements set out.

Field of employment

Ministry of Defense of Georgia; Joint Staff of the Georgian Armed Forces; Ministry of Internal Affairs of Georgia; Higher education institutions; Ministry of Regional Development and Infrastructure; Georgian railway.

Human and material resources necessary for the implementation of the program

The PhD program in the Georgian Technical University and mainly the Faculty of Construction is provided as a material-technical resource, as well as specialists in military engineering subdivisions.

1. Material-Technical Resources

- Powerful and diverse base of computer with appropriate software that allows to conduct complex research - graphic part, calculation and design, system animation, computer experiments and other procedures;
- Georgian Technical University Institute of Constructions, Special Systems and Engineering Maintenance and Faculty of Constructions have the opportunity to use a Phantom complex where military bridges, terrestrial missile engineering complexes and aerospace and installation of stunts are provided;
- Study-Scientific and Expert Laboratory of the Faculty of Construction of Georgian Technical University;
- According to researches, doctoral students have the opportunity to use the bases and technical resources of the Faculties of the Georgian Technical University, which is in compliance with the requirements of the military-engineering field;

2. Academic staff implementing Doctoral Educational Program:

- Doctor of Technical Sciences, Doctor of Military Sciences, Professor, Academician of the Georgian National Academy of Sciences, Major-General Elguja Medzmariashvili;
- Professors of Georgian Technical University: Manana Moistsrafishvili, Aleqsi Burduladze, Mikheil Shilakadze, Nana Khundadze, Guram Gogia, Mamuka Sanikidze.

Number of attached syllabus: 7

Program subject load

| № | Training component | Precondition of admit | ECTS Credit | | | | | | | |
|---|--|--|-------------|----|---------|----|----------|----|--|--|
| | | | I Year | | II Year | | III Year | | | |
| | | | Semester | | | | | | | |
| | | | I | II | III | IV | V | VI | | |
| 1. | Scientific communication A | N/A | 4 | | | | | | | |
| 2. | Teaching Methods and Education Management of the Military | N/A | 6 | | | | | | | |
| 3. | Structure of the military science, essence and research methods | N/A | | 5 | | | | | | |
| Special courses related to Doctoral Program: | | | 10 | 10 | | | | | | |
| 4. | Military Terminology | N/A | 5 | | | | | | | |
| 5. | The course of construction art for the military | N/A | 5 | | | | | | | |
| 6. | Armed battle and defensive environment for military | Military terminology. | | 5 | | | | | | |
| 7. | Military engineering - The engineering preparation of the territory for defence and military-engineering support of combat actions and operations. | Architecture Course for Military Forces. | | 5 | | | | | | |
| 8. | Thematic Seminar - 1 | | 10 | | | | | | | |
| 9. | Thematic Seminar - 2 | | | 15 | | | | | | |
| Research component | | | | | | | | | | |
| 10. | Colloquium - 1 | | | | 30 | | | | | |
| 11. | Colloquium - 2 | | | | | 30 | | | | |
| 12. | Preparing Disertation topic | | | | | | | 60 | | |
| Total per Year: | | | 60 | 60 | 6 | | | | | |

| | |
|-------|----|
| Total | 18 |
|-------|----|

Map of learning outcomes

| № | Training component | Knowledge and understanding | Ability to use knowledge in practice | Making judgments | communication skill | ability to learn | Values |
|---------------------|--|-----------------------------|--------------------------------------|------------------|---------------------|------------------|--------|
| | | | | | | | |
| 1. | Scientific communication techniques A | X | X | | | X | |
| 2. | Teaching methods and education management | X | X | X | X | | X |
| 3. | Structure of military science, essence and research methods | X | X | X | X | X | X |
| 4. | Military terminology | X | X | X | X | X | X |
| 5. | The course of construction art for the military | X | X | X | X | X | X |
| 6. | Armed battle and defensive environment for military | X | X | X | X | X | X |
| 7. | Military engineering - The engineering preparation of the territory for defence and military-engineering support of combat actions and operations. | X | X | X | X | X | X |
| 8. | Thematic Seminar - 1 | X | X | X | X | X | X |
| 9. | Thematic Seminar - 2 | X | X | X | X | X | X |
| Research components | | | | | | | |
| 10. | Colloquium-1 | X | X | X | X | X | X |
| 11. | Colloquium - 2 | X | X | X | X | X | X |
| 12. | Prepare and secure a dissertation | X | X | X | X | X | X |

Program curriculum

| № | Subject Code | Trainin component | ESTSCredit, hour | бssoo | | | | | | |
|---|-------------------|---|------------------|---------|-----------------------|---------|------------|--------------|------------|------------------|
| | | | | Lecture | Seminar (group workz) | Practic | Laboratory | Midterm exam | Final exam | Independent work |
| 1 | LEH19708G2 | Scientific communication A | 4/100 | 15 | 15 | | | 1 | 2 | 67 |
| 2 | EDU10213G1 | Teaching methods and education management | 6/150 | 30 | 30 | | | 1 | 2 | 87 |

| | | | | | | | | | | |
|---|-------------------|--|-------|----|--|--|--|---|---|----|
| 3 | SES10301G1 | Structure of military science, essence and research methods | 5/125 | 45 | | | | 2 | 2 | 76 |
| 4 | SES10401G1 | Military terminology | 5/125 | 45 | | | | 2 | 2 | 76 |
| 5 | SES10501G1 | The course of construction art for the military | 5/125 | 45 | | | | 2 | 2 | 76 |
| 6 | SES10601G1 | Armed battle and defensive environment for military | 5/125 | 45 | | | | 2 | 2 | 76 |
| 7 | SES10701G1 | Military engineering - The engineering preparation of the territory for defence and military-engineering support of combat actions and operations. | 5/125 | 45 | | | | 2 | 2 | 76 |

Program supervisor

Elguja Medzmariashvili

Head of the Quality Assurance Service
of the Faculty of Construction

Marina Javakhishvili

Dean of the Faculty of Construction

David Gurgenidze

Received

At the council meeting
of Faculty of Construction
16.01.2013 Protocol №1

Agreed with

Quality Assurance Service of GTU

Irma Inashvili

Modified

At the council meeting
of Faculty of construction

Chairman of the board of Faculty of Constructions

David Gurgenidze