



საქართველოს ტექნიკური უნივერსიტეტი
GEORGIAN TECHNICAL UNIVERSITY

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Academic Board of GTU
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Bachelor's Educational Program

Name of the program

სამშენებლო სატრანსპორტო-ტექნოლოგიური საშუალებები

Construction Transport and Technological Means

Faculty

სამშენებლო

Civil Engineering

Program manager

Professor Mikheil Shilakadze

Qualification and program credits

მექანიკის ინჟინერიისა და ტექნოლოგიის ბაკალავრი
(Bachelor in the specialty Mechanical Engineering and Technology)

Will be awarded in the case of passing not less than 240 credits of an educational program in a combination to free components (220 credits on the main specialty and 20 credits of free components)

The language of teaching

Georgian

Precondition for admission to the program

Description of the program

prerequisite for access to the program the Bachelor's Degree has the right to study only the certificate of full state education. or a prson equal to him shall be enrolled in accordance with the procedure established by the legistration of Georgia. Additional prerequisites are available.

Discription of the program

The program is made according to the European system of credit transfer and accumulation (ECTS), 1 eredet equals 25 hours and includes independet and contact hours. Distribution is presented in the curriculum. Bachelor - according to educational program student learns less than 240 (ECTS)

credits. Annual total amount of credits accrued by the student a) It is possible to exceed 60 credits b) Less than 60 credits are allowed c) It is not allowed to exceed 75 credits.

The duration of the program is determined for 4 years (8 semesters). The semester includes 20 weeks. Training weeks are 15.

The student is given the opportunity to pass the final exam, who has completely fulfilled the prerequisites provided by the educational program and minimum competence limit crossed the semester assessment. If the total value of the median assessment and final examination of the mid-term evaluation is 45-50 (FX-evaluation - failed) 51 or more than. Student has the right to leave the exams once again during the session. The interval between the final and the test will not be less than 5 days. The assessment score received by the student is not added to the assessment score obtained on the final exam. The additional assessment is the final assessment and will be reflected in the final assessment of the education component of the educational program. Part of the level of evaluation of student learning results in each component consists of evaluation and conclusion the interim assessment includes the current activity and the mid-examination exam. Each component of the evaluation has minimum competence limit which is defined in the instruction of the management process of Georgian Technical University and it is also written in the training course (in the syllabus) you can find more information on the following web address of GTU instructional management program.:

http://gtu.ge/Study-Dep/Files/Pdf/martvis_%20instruc_18_SD.PDF

The purpose of the program

To prepare mechanical engineer and technology bachelor, who will be focused on broad field knowledge, design and practical activities, will be able to utilize efficient use of construction machinery and equipment, to understand the problem in the field of engineering and to solve the arising problems creatively.

To study: principles of creation of crane-transport vehicles, construction-road vehicles, harbors, lifts, special transport - design, modernization, testing, repair and operation.

Outcomes/competences (general and sectoral)

Bachelor has the knowledge and understanding:

- Wide knowledge required for the design, operation, repair and service of machinery and equipment in mechanical engineering and technology, which includes critical understanding of theories and principles, understanding the complex issues of the field;
- Knowledge of basic functional elements of modern cars and machine complexes;
- Knowledge of design and calculation methods;
- Ability to understand the basic principles of the processes of the operation of machine-appliance technologies and equipment;
- Wide theoretical knowledge of the field of construction and technological means;
- Understanding the relationship between the main areas of construction and technological means;
- Knowledge of the terminology of manufacturing of construction transport technologies;
- Knowledge of the principles of production, repair, service and operation of manufacturing, transport and technology, machinery and systems;
- Ability to understand basic principles and methods for designing repair vehicles and parts of vehicles;

Bachelor can use knowledge in practice:

- Use of theoretical and practical knowledge characteristic of mechanics engineering and technologies to solve problems arising in the operation of appropriate machinery;
- Designing of main components of modern construction transport technologies and systems - vehicles and parts of vehicles, knots, mechanisms and tribulation systems, in accordance with predetermined instructions;
- Participation in establishing cinematic, power and dynamic calculations and design, as well as characteristics of vehicles and equipment;
- In the process of technical exploitation, repair, modernization, and the development of structural and constructive schemes of machinery and machine systems, the use of specific areas of the field and the use of some outstanding methods in accordance with predetermined instructions.

Bachelor can conclude:

- Ability to collect new and inferred data, analyze situations, and substantiate conclusions on the basis of solutions to mechanical engineering and technology;
- Cinematic analysis of spatial mechanisms to conduct and interpret dynamic calculations of motors systems;
- The ability to exploit data collection, explanation and reasonable conclusions on technological processes for maintenance and maintenance of construction transport technologies, technical equipment of machinery and equipment.

Bachelor can communicate:

- To prepare detailed written report on the problems and solutions found in the operation of machinery and mechanisms, and ability to transmit information to specialists and non-specialists in Georgian and foreign languages;
- The ability to use information technologies to creatively solve problems about craft-transport, construction and road vehicles
- Ability to use computer systems and applied technologies in the manufacturing process of mechanical engineering;
- Ability to search and process new technical information in construction and technological means;
- Ability to write constructive documents for construction materials.
- Ability to present written information.

Bachelor has learning skills

- Ability to determine the need to study the second level of education (master's) in order to enrich and enhance the knowledge and experience, in order to evaluate their own learning process consistently and multilaterally;
- Using different technical sources to expand interest and continuously renew the knowledge for successful engineering work

Bachelor has values

- To perform loading and unloading activities in accordance of safety norms and requirements, strict protection of human life and health.
- To protect the requirements of ecological safeguards while producing works with construction vehicles and equipment.
- To participate in the formation of values, moral norms and to pursue them.

Methods of achieving learning outcomes (teaching and learning)

Methods of achieving learning outcomes (teaching and learning)

Lecture Seminar (work in group) Practical Laboratory practice Course paper / project Master's paper Consultation Independent work

Based on the specific course of study in the learning process, the relevant below listed activities of the teaching-learning methods are used, which are reflected in the relevant training courses (syllabus):

1. **Discussion/debates.** This is the most widely spread method of interactive teaching. A discussion process greatly increases the quality of students' involvement and their activity. A discussion may turn into an argument and this process is not merely confined to the questions posed by the teacher. It develops students' skills of reasoning and substantiating their own ideas.
2. **Cooperative teaching** is a teaching strategy in the process of which each member of a group not only has to learn the subject himself, but also to help his fellow-student to learn it better. Each member of the group works at the problem until all of them master the issue.
3. **Collaborative work;** using this method implies dividing students into separate groups and giving each group its own task. The group members work at their issues individually and at the same time share their opinions with the rest of the group. According to the problem raised, it is possible to shift the functions among the group members in this process. This strategy ensures the students' maximum involvement in the learning process.
4. **Problem-based learning (PBL)** is a method which uses a concrete problem as the initial stage both for acquiring new knowledge and integration process.

5. **Eurastic method** is based on the gradual solution of the task set. This process is carried out independently of the learning facts and by seeing the connections between them.
6. **Case study** – the teacher discusses concrete cases together with the students and they study the issue thoroughly. E.g., in the sphere of engineering safety it can be a discussion of a concrete accident or catastrophe, or in political science it can be a study of a concrete
7. **Brain storming** – this activity implies to form and promote radically different opinion, idea on concrete issue/problem. This activity contributes to the development of a creative approach to the problem. Its application is effective in case of a large number of students and consists of several main stages: – Problem / issue determination in a creative perspective; – In a certain period of time, without criticism, note the ideas expressed by the listeners (mainly on the board); – Determination of assessment criteria to determine the establish the conformity of the idea with the aim of the research; – Assessment of selected ideas with predetermined criteria; – By process of elimination, distinguish those ideas that are most relevant to the issue. – Demonstration of the highest evaluation idea as the best way to solve the set problem
8. **Role and situational games** – games that are fulfilled according to predefined scenario allow students to look at the issue differently. It helps them to develop an alternative viewpoint. Like discussions, these games also formulate the student's ability to express and protect his/her position independently
9. **Demonstration method** implies presenting information with the help of visual aids. It is quite effective in reaching the required result. It is frequently advisable to present the material simultaneously through audio and visual means. The material can be presented both by a teacher and a student. This method helps us to make different steps of perceiving the teaching material more obvious, specify what steps the students are supposed to take independently; at the same time this strategy visually shows the essence of an issue/problem. Demonstration can be very simple.
10. **Induction** is such a form of transmitting any knowledge when the process of thinking in the course of the study is directed towards generalization, in other words when delivering the material the process is going from concrete to general.
11. **Demonstration method** implies presenting information with the help of visual aids. It is quite effective in reaching the required result. It is frequently advisable to present the material simultaneously through audio and visual means. The material can be presented both by a teacher and a student. This method helps us to make different steps of perceiving the teaching material more obvious, specify what steps the students are supposed to take independently; at the same time this strategy visually shows the essence of an issue/problem. Demonstration can be very simple.
12. **Analytical method** helps us to divide the whole teaching material into constituent parts. In this way the detailed interpretation of separate issues within the given complex problem is simplified.
13. **Synthetic method** implies forming one issue from several separate ones. This method helps students to develop the ability of seeing the problem as a whole.
14. **Verbal or oral method** comprises a lecture, narration, conversation, etc. During the process the teacher conveys, explains the material verbally, and students perceive and learn it by comprehending and memorizing.
15. **Written method** implies the following forms of activity: copying, taking notes, composing theses, writing essays.
16. **Practical activity** unite all the teaching forms that stimulate developing practical skills in students. In this case a student independently performs different kinds of activity on the basis of the knowledge acquired
17. **Explanatory method** is based on discussing a given issue. In the process of explaining the material the teacher brings concrete examples the detailed analysis of which is made in the framework of the given topic.
18. **Activity-oriented teaching** implies teachers' and students' active involvement in the teaching process, when practical interpretation of the theoretical material takes place.
19. **Designing and presenting a project.** While designing a project a student applies the knowledge and skills he has acquired for solving a problem. Teaching by means of designing projects increases students' motivation and responsibility. Working on a project involves the stages of planning, research, practical activity and presenting the results according to the chosen issue. The project is considered to be

completed if its results are presented clearly, convincingly, and correctly. It can be carried out individually, in pairs or in groups; also, within the framework of one or several subjects (integration of subjects); on completion the project is presented to a large audience.

Student knowledge assessment system

Grading system is based on a 100-point scale.

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.

Opportunity to continue learning

Master's Educational Programs

Program subject load

№	Subject	Precondition of admit	ECTS Credits							
			I Year		II Year		III Year		IV Year	
			Semester							
			I	II	III	IV	V	VI	VII	VIII
1.	Engineering Mathematics 1	N/A	5							
2.	General Physics 1	N/A	4							
3.	General Chemistry	N/A	4							
4.	Descriptive Geometry	N/A	3							
5.	Computer Systems and Applied Technologies1	N/A	4							
6.	Foreign Language:									
6.1.	English for Technical Specialties 1									
6.2.	German for Technical Specialties 1		3							
6.3.	French for Technical Specialties 1									
6.4.	Russian for Technical Specialties1									
7.	Environment Protectionand Ecology	N/A	3							
8.	Basics of Labour Protection	N/A	3							

9.	Engineering Mathematics 2	Engineering Mathematics 1		5						
10.	General Physics 2	General Physics 1		4						
11.	Projective Drawing	Descriptive Geometry		3						
12.	Computer Systems and Applied Technologies ²	Computer Systems and Applied Technologies ¹		4						
13.	Foreign Language:									
13.1.	English for Technical Specialties 2	English for Technical Specialties 1								
13.2.	German for Technical Specialties 2	German for Technical Specialties 1		3						
13.3.	French for Technical Specialties 2	French for Technical Specialties 1								
13.4.	Russian for Technical Specialties 2	Russian for Technical Specialties 1								
14.	Obligatory Selective Training Courses									
14.1.	The basics of philosophy	N/A		3						
14.2.	Introduction to Psychology									
14.3.	History of Georgia									
14.4.	Introduction to Sociology									
14.5.	Culturology									
14.6.	Basis of Politology									
15.	Electrical and Electronic Engineering	N/A		4						
16.	Engineering Mathematics 3	Engineering Mathematics 2		5						
17.	Fundamentals of strength of materials	Engineering Mathematics 1 General Physics 1		4						
18.	Mechanical Drawing	Projective Drawing		3						
19.	Heat Transfer	Engineering Mathematics 2 General Physics 2		3						
20.	Theoretical mechanics	Engineering Mathematics 1		4						
21.	Firm menegement	N/A		4						
22.	Introduction in Specialty	N/A		5						
23.	The Basics of Hydraulics	Engineering Mathematics 1 General Physics 1		3						
24.	Fundamentals of Applied Theory of Oscillations	N/A			5					
25.	Theory of Machines	Theoretical mechanics			4					
26.	Assumptions and Teqnickal Measurements	Mechanical Drawing			4					
27.	Machine Elements	Theoretical mechanics; Fundamentals of strength of materials			6					
28.	Productions in Mechanical Engineering	N/A			5					
29.	Friction Actuators of Mechanical	Theoretical mechanics			5					

	Equipment								
30.	Friction Actuators of Mechanical Equipment	Machine Elements					6		
31.	Dynamics of Machines	Machine Elements					5		
32.	Fundamentals of Tribo-Engineering	Machine Elements					6		
33.	Metalwork of Lifting-and-Shifting Machines	Fundamentals of strength of materials					6		
34.	Electrical Equipment of Technological Transport	Electrical and Electronic Engineering					6		
35.	Fundamentals of Drawing up Engineering Item's Design Documentation	Mechanical Drawing					5		
36.	Installation of Construction Machinery	N/A					5		
37.	Computer Engineers Graphics	Mechanical Drawing					6		
38.	Hydraulic systems and Actuators of Construction Machinery	The Basics of Hydraulics					5		
39.	Installation, Operation and Repair of Pneumatic and Hydraulic Equipment	The Basics of Hydraulics					5		
40.	Freight Containers, Classification and Structure	N/A							5
41.	Ergonomics and Industrial Design	N/A							5
42.	Bachelor Work								10
Specialty Obligatory Selective Training Courses							30		
Lifting-and-Shifting, Construction and Road Machines									
43.	Construction Machinery and Equipment	Installation of Construction Machinery; Machine Elements					6		
44.	Lifting-and-Shifting Machines	Metalwork of Lifting-and-Shifting Machines; Electrical Equipment of Technological Transport					6		
45.	Machines and Mechanisms of Technological Transportation	Installation of Construction Machinery; Electrical Equipment of Technological Transport					6		
46.	Operation and Maintenance of Lifting-and-Shifting and Machines	Installation of Construction Machinery					6		
47.	Dynamics of Lifting-and-Shifting Machines	Machine Elements					6		
Port Technological Transport and Equipment									
48.	Organization Load-off Operations in Marine and Land Terminals	Machine Elements					6		
49.	Port Hoisting and Transportation Equipment	Machine Elements					6		

50.	Operation and Maintenance of Technological Devices of Port	Installation of Construction Machinery;									6		
51.	Vibratory Machines	Fundamentals of Applied Theory of Oscillations									6		
52.	Safety rules and regulations for loading and unloading operations	N/A									6		
Mechanical Equipment of the Industry Complex of Construction													
53.	Fire-prevention Prevention and Explosion Safety at the Enterprises of the Construction Industry	N/A									6		
54.	Fundamentals of Automatization in Construction Industry	Electrical and Electronic Engineering									6		
55.	Mechanical Equipment of the Enterprises of the Industry of Transport Construction	Machine Elements									6		
56.	Vibratory Machines and Equipments of Construction Industry	Fundamentals of Applied Theory of Oscillations									6		
57.	Earth and Road Machines	Machine Elements; Ergonomics and Industrial Design									6		
	free components			5					5			10	
58.	Materials science	N/A									5		
59.	Marketing for Construction	N/A									5		
60.	Introduction to Human Resource Management	N/A									5		
61.	Construction Ethics, Law and Contracts	N/A									5		
62.	Welding Technology	N/A									4		
63.	Style architecture	N/A									5		
64.	History of the Earth	N/A									3		
65.	Georgian architectural monuments	N/A									5		
66.	Green construction	N/A									3		
67.	Economy of Georgia	N/A									3		
68.	Success Strategy	N/A									3		
69.	The court is the basis for technical and technical expertise	N/A									5		
70.	Construction Organization and Management	N/A									4		
Per semester			29	31	31	29	28	32	30	30			
Per year			60		60		60		60				
Total			240										

learning outcomes

№	Subject	Knowledge and understanding	Ability to use knowledge in practice	Making judgments	Communication skill	Ability to learn	Values
1.	Engineering Mathematics 1	+	+			+	
2.	General Physics 1	+		+		+	
3.	General Chemistry	+	+		+	+	
4.	Descriptive Geometry	+	+			+	
5.	Computer Systems and Applied Technologies1	+	+	+	+		
6.	Foreign Language:						
6.1.	English for Technical Specialties 1	+	+		+	+	
6.2.	German for Technical Specialties 1	+	+		+	+	
6.3.	French for Technical Specialties 1	+	+		+	+	
6.4.	Russian for Technical Specialties 1	+	+		+	+	
7.	Environment Protection and Ecology	+	+				+
8.	Basics of Labour Protection	+	+	+			
9.	Engineering Mathematics 2	+	+			+	
10.	General Physics 2	+		+		+	
11.	Projective Drawing	+	+			+	
12.	Computer Systems and Applied Technologies2	+	+	+	+		
13.	Foreign Language:						
13.1.	English for Technical Specialties 2	+	+		+	+	
13.2.	German for Technical Specialties 2	+	+		+	+	
13.3.	French for Technical Specialties 2	+	+		+	+	
13.4.	Russian for Technical Specialties 2	+	+		+	+	
14.	Obligatory Selective Training Courses						
14.1.	The basics of philosophy	+	+				+
14.2.	Introduction to Psychology	+	+		+		
14.3.	History of Georgia	+	+	+	+		
14.4.	Introduction to Sociology	+	+	+			+
14.5.	Culturology	+			+		+
14.6.	Basis of Politology	+	+	+	+		
15.	Electrical and Electronic Engineering	+		+		+	
16.	Engineering Mathematics 3	+	+			+	
17.	Fundamentals of strength of materials	+	+	+		+	

18.	Mechanical Drawing	+	+			+	
19.	Heat Transfer	+	+	+		+	
20.	Theoretical mechanics	+	+	+		+	
21.	Firm menegement	+	+	+		+	
22.	Introduction in Specialty	+	+			+	
23.	The Basics of Hydraulics	+	+	+			
24.	Fundamentals of Applied Theory of Oscillations	+	+			+	
25.	Theory of Machines	+	+			+	
26.	Assumptions and teqncal measurements	+	+			+	+
27.	Machine Elements	+	+	+			
28.	Productions in Mechanical Engineering	+	+	+	+	+	
29.	Friction Actuators of Mechanical Equipment	+	+	+			
30.	Friction Actuators of Mechanical Equipment	+	+			+	
31.	Dynamics of Machines	+	+			+	
32.	Fundamentals of Tribo-Engineering	+	+			+	
33.	Metalwork of Lifting-and-Shifting Machines	+	+			+	
34.	Electrical Equipment of Technological Transport	+	+	+			
35.	Fundamentals of Drawing up Engineering Item's Design Documentation	+	+			+	
36.	Installation of Construction Machinery	+	+	+			
37.	Computer Engineers Graphics	+	+	+			
38.	Hydraulic systems and Actuators of Construction Machinery	+	+	+			
39.	Installation, Operation and Repair of Pneumatic and Hydraulic Equipment	+	+			+	
40.	Freight Containers, Classification and Structure	+	+			+	
41.	Ergonomics and Industrial Design	+	+	+			
42.	Bachelor Work	+	+	+			
	Specialty Obligatory Selective Training Courses						
	Lifting-and-Shifting, Construction and Road Machines						
43.	Construction Machinery and Equipment	+	+	+			
44.	Lifting-and-Shifting Machines	+	+	+			
45.	Machines and Mechanisms of Technological Transportation	+	+	+			
46.	Operation and Maintenance of Lifting-and-Shifting and Construction Machines	+	+	+			
47.	Dynamics of Lifting-and-Shifting Machines	+	+			+	
	Port Technological Transport and Equipment						
48.	Organization Load-off Operations in Marine and Land Terminals	+	+			+	
49.	Port Hoisting and Transportation Equipment	+	+			+	
50.	Operation and Maintenance of Technological Devices of Port	+	+	+			
51.	Vibratory Machines	+	+			+	
52.	Safety rules and regulations for loading and unloading operations	+	+	+			
	Mechanical Equipment of the Industry Complex of Construction						
53.	Fire-prevention Prevention and Explosion Safety at the Enterprises of the Construction Industry	+	+	+			+
54.	Fundamentals of Automatization in Construction Industry	+	+	+			
55.	Mechanical Equipment of the Enterprises of the Industry of Transport Construction	+	+	+			
56.	Vibratory Machines and Equipments of Construction Industry	+	+			+	
57.	Earth and Road Machines	+	+			+	
	free components						

58.	Materials science	+	+	+			
59.	Marketing for Construction	+	+	+			+
60.	Introduction to Human Resource Management	+	+	+	+	+	+
61.	Construction Ethics, Law and Contracts	+	+		+		+
62.	Welding Technology		+	+		+	+
63.	Style architecture	+		+			+
64.	History of the Earth	+	+	+			
65.	Georgian architectural monuments	+	+		+	+	
66.	Green construction	+	+	+			
67.	Economy of Georgia	+	+			+	+
68.	Success Strategy	+	+			+	+
69.	The court is the basis for technical and technical expertise	+	+	+	+		
70.	Construction Organization and Management	+	+	+			

Program curriculum

№	Subject code	Subject	ECTS Credit/Hours	Hours								
				Lecture	Seminar (work in the group)	Practical classes	Laboratory	Practice	Course work/project	Mid-semester exam	Final exam	Independent work
1.	MAS33508G1-LP	Engineering Mathematics 1	5/125	15		30				1	1	78
2.	PHS51208G1-LB	General Physics 1	4/100	15			15			1	1	68
3.	PHS16404G1-LB	General Chemistry	4/100	15			15			1	1	68
4.	EET70105G1-LP	Descriptive Geometry	3/75	15		15				1	1	43
5.	ICT13901G2-LB	Computer Systems and Applied Technologies1	4/100			15	15			1	1	68
6.		Foreign Language:										
6.1.	LEH14412G1-P	English for Technical Specialties 1	3/75			30				1	1	43
6.2.	LEH15012G1-P	German for Technical Specialties 1										
6.3.	LEH14812G1-P	French for Technical Specialties 1										
6.4.	LEH14612G1-P	Russian for Technical Specialties 1										
7.	EET20404G1-LB	Environment Protection and Ecology	3/75	15			15			1	1	43
8.	HHS20303G1-LB	Basics of Labour Protection	3/75	15			15			1	1	43
9.	MAS33608G1-LP	Engineering Mathematics 2	5/125	15		30				1	1	78
10.	PHS51308G1-LB	General Physics 2	4/100	15			15			1	1	68
11.	EET70205G1-P	Projective Drawing	3/75			30				1	1	43
12.	ICT14001G2-LB	Computer Systems and Applied Technologies2	4/100			15	15			1	1	68
13.		Foreign Language:										
13.1.	LEH14512G1-P	English for Technical Specialties 2	3/75			30				1	1	43
13.2.	LEH15112G1-P	German for Technical Specialties 2										
13.3.	LEH14912G1-P	French for Technical Specialties 2										
13.4.	LEH14712G1-P	Russian for Technical Specialties 2										

14.		Obligatory Selective Training Courses										
14.1.	HEL30212G1-LS	The basics of philosophy										
14.2.	SOS30312G1-LS	Introduction to Psychology										
14.3.	HEL20212G1-LS	History of Georgia	3/75	15	15					1	1	43
14.4.	SOS40312G1-LS	Introduction to Sociology										
14.5.	SOS43811G1-LS	Culturology										
14.6.	SOS62411G1-LS	Basis of Politology										
15.	EET40202G1-LB	Electrical and Electronic Engineering	4/100	15			15			1	1	68
16.	MAS33708G1-LP	Engineering Mathematics 3	5/125	15		30				1	1	78
17.	EET72901G1-LP	Fundamentals of strength of materials	4/100	15		15				1	1	68
18.	EET70305G1-P	Mechanical Drawing	3/75			30				1	1	43
19.	EET49301G1-LB	Heat Transfer	3/75	15			15			1	1	43
20.	MAS37601G1-LP	Theoretical mechanics	4/100	15		15				1	1	68
21.	BUA32301G2-LS	Firm menegement	4/100	15	15					1	1	68
22.	EET77401G1-LP	Introduction in Specialty	5/125	30		15				1	1	78
23.	AAC48601G1-LB	The Basics of Hydraulics	3/75	15			15			1	1	43
24.	EET77901G1-LP	Fundamentals of Applied Theory of Oscillations	5/125	30		15				1	1	78
25.	EET77205G1-LK	Theory of Machines	4/100	15				15		1	1	68
26.	EET78201G2-LB	Assuptions and teqncal measurements	4/100	15			15			1	1	68
27.	MACEL05GA2-LPE	Machine Elements	6/150	30		15	15			1	1	88
28.	EET72905G2-LPB	Productions in Mechanical Engineering	5/125	15		15	15			1	1	78
29.	EET77501G1-LP	Friction Actuators of Mechanical Equipment	5/125	15		30				1	1	78
30.	EET77601G1-LPB	Friction Actuators of Mechanical Equipment	6/150	30		15	15			1	1	88
31.	EET78301G1-LP	Dynamics of Machines	5/125	30		15				1	1	78
32.	EET77701G1-LBK	Fundamentals of Tribo-Engineering	6/150	30			15	15		1	1	88
33.	EET78401G1-LP	Metalwork of Lifting-and-Shifting Machines	6/150	30		30				1	1	88
34.	EET49201G1-LP	Electrical Equipment of technological Transport	6/150	30		30				1	1	88
35.	EET78701G1-LP	Fundamentals of Drawing up Engineering Item's Design Documentation	5/125	15		30				1	1	78
36.	EET78501G1-LP	Installation of Construction Machinery	5/125	30		15				1	1	78
37.	EET70805G1 -P	Computer Engineers Graphics	6/150			60				1	1	88
38.	EET78601G1-LP	Hydraulic systems and Actuators of Construction Machinery	5/125	30		15				1	1	78
39.	EET78901G1-LP	Installation, Operation and Repair of Pneumatic and Hydraulic Equipment	5/125	30		15				1	1	78
40.	TRS11501G1-LP	Freight Containers, Classification and Structure	5/125	30		15				1	1	78
41.	ART21901G1-LP	Ergonomics and Industrial Design	5/125	15		30				1	1	78
42.	EET79901G1-K	Bachelor Work	10/250				45	30		1	1	173
		Specialty Obligatory Selective Training Courses										
		Lifting-and-Shifting, Construction and Road Machines										
43.	EET71501G2-LBK	Construction Machinery and	6/150	30			15	15		1	1	88

		Equipment										
44.	EET77801G1-LPK	Lifting-and-Shifting Machines	6/150	30		15			15	1	1	88
45.	EET79201G1-LP	Machines and Mechanisms of Technological Transportation	6/150	30		30				1	1	88
46.	EET79101G1-LPB	Operation and Maintenance of Lifting-and-Shifting and Construction Machines	6/150	30		15	15			1	1	88
47.	EET78001G1-LP	Dynamics of Lifting-and-Shifting Machines	6/150	45		15				1	1	88
	Port Technological Transport and Equipment											
48.	BUA48001G1-LP	Organization Load-off Operations in Marine and Land Terminals	6/150	30		30				1	1	88
49.	EET78801G1-LP	Port Hoisting and Transportation Equipment	6/150	30		30				1	1	88
50.	EET79001G1-LP	Operation and Maintenance of Technological Devices of Port	6/150	45		15				1	1	88
51.	EET78201G1-LP	Vibratory Machines	6/150	45		15				1	1	88
52.	HHS23003G1 - LP	Safety rules and regulations for loading and unloading operations	6/150	45		15				1	1	88
	Mechanical Equipment of the Industry Complex of Construction											
53.	HHS27601G1-LP	Fire-prevention Prevention and Explosion Safety at the Enterprises of the Construction Industry	6/150	45		15				1	1	88
54.	EET06001G1-LPB	Fundamentals of Automatization in Construction Industry	6/150	30		15	15			1	1	88
55.	EET79401G1-LPK	Mechanical Equipment of the Enterprises of the Industry of Transport Construction	7/175	30		15			15	1	1	113
56.	EET78101G1-LP	Vibratory Machines and Equipments of Construction Industry	5/125	30		15				1	1	78
57.	EET79301G1-LPB	Earth and Road Machines	6/150	30		15	15			1	1	88
	free components											
58.	EET83104G1-LB	Materials science	5/125	15			30			1	1	78
59.	BUA53401G1-LS	Marketing for Construction	5/125	15	30					1	1	78
60.	BUA75101G1-LS	Introduction to Human Resource Management	5/125	15	30					1	1	78
61.	AAC81301G1-LP	Construction Ethics, Law and Contracts	5/125	15	30					1	1	78
62.	EET78301G2-L	Welding Technology	4/100	15		15				1	1	68
63.	AAC12905G1-LS	Style architecture	5/125	15	30					1	1	78
64.	PHS20103G1-LS	History of the Earth	3/75	15	15					1	1	43
65.	ART40201G1-LS	Georgian architectural monuments	5/125	15	30					1	1	78
66.	AAC13005G1-LS	Green construction	3/75	15	15					1	1	43
67.	SOS16105G2-LS	Economy of Georgia	3/75	15	15					1	1	43
68.	BUA37105G1-LS	Success Strategy	3/75	15	15					1	1	43
69.	AAC31501G2-LS	The court is the basis for technical and technical expertise	5/125	15	15				15	1	1	78
70.		Construction Organization and Management	4/100	15		15				1	1	68

Faculty of Civil Engineering
Head of Quality Assurance Service

Marina Javakhishvili

Dean of the Faculty

David Gurenidze

Agreed with

Quality Assurance Service of GTU

Irma inashvili

Modified

Faculty of Civil Engineering
At the meeting of Faculty Board
N 25 30.03.2018
Chairman of the Faculty Boar

David Gurgenidze