საქართველოს ტექნიკური უნივერსიტეტი
GEORGIAN TECHNICAL UNIVERSITY

Approved by
Academic Board of GTU
Order №740 5 September 2012
Modified
Academic Board of GTU
Order № 01-05-04.96
02.04.2018

Bachelor's Educational Program

Name of the program

Строительство
Construction

Faculty

Строительный
Civil Engineering

Program manager

Professor Fatima Verulashvili

Qualification and program credits

Engineering in construction in Georgian Bachelor Бакалавр **инженерии в строительстве** 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

Russian

Precondition for admission to the program

The studying rights on a Bachelor's program is entitled person who has at least state certificate confirming the full general education or the person equated to him which is enlisted according to the legislation of Georgia.

Description of the program

Description of the program The program is made according to the European system of credit transfer and accumulation (ECTS), 1 credit equals 25 hours and includes independent 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 excel 3/75 credits.
The duration of the program is determined for 4 years (8 semesters). The semester includes 20 weeks. Training weeks are 15.
XVI - week is a mid-semester test
XVII - week is a preparatory period for the final exams
XVIII and XIX - week are the final exam.
XX - week is intended or an additional exam (as needed).
The student is given the opportunity to pass the final exam, who has completely fulfilled the prerequisite 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 occurred 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_%20instruqc_18_SD.PDF
After completion of the program a Bachelor's degree will be given qualification Doctor of Engineering in Construction, Basic specialty at least 220 credits and duet component less than 20 credits

The purpose of the program

- Train specialists of the construction industry oriented toward construction, designing and practical activities with the basis of knowledge acquired in the field of engineering, who will be equipped with solid basic knowledge and transfer skills and capable of orientation in dynamically changing environment.
- Teach the methods and mechanisms of reaching the key objectives of the construction and designing activity using modern technologies and fully complying with construction norms and rules.
- Provide knowledge of the risk factors to be considered during construction in the process of designing buildings and structures in order to be able to critically realize the industry-related problems, prepare the relevant documentation and resolve the problems in a reliable and substantiated manner.
- Develop the skill of professional communication in the appropriate format.
- Train qualified, competitive specialists with civic consciousness and activeness developed at a high level who will be meeting the modern requirements, motivated to build a worthy career and striving for reaching further heights in terms of professional growth.

Outcomes/competences (general and sectoral)

Knowledge and Understanding – the Graduates Will Have:

- Both theoretical and practical knowledge and skills in the field of construction as well as in the various specifically specialized technological processes within it providing basis for building the skills required for preparation of construction sites through engineering works, transportation and loading/offloading operations of construction related cargo/loads, conduction of earth works, foundation laying, stone, monolithic concrete and ferroconcrete works, structural and planning solutions of buildings, development of the skills required by crane and transportation facility operators and, accordingly, understanding of the limits of professional activities.
- Knowledge of the basic concepts, theories and principles of construction and designing;
- Understanding of the ethical and professional responsibility of the industry specialist;
- Knowledge of conduction of construction works in safe and environmentally friendly manner.

Understanding of the inter mutual dependence between technical and environmental issues;
- Knowledge of the respective mathematical methods and basics of natural sciences that are required for solving engineering problems;
- Knowledge of the industry-specific management and project elements;
- Knowledge and understanding of the construction norms and rules as well as of the complex issues related to the construction-specific technological processes to be employed in the process of construction;
- Understanding and realization of the necessity to obtain and further skills and knowledge throughout the entire life.

Ability to use Acquired Knowledge and Skills in Practice – the Graduates Will Have and be Able to:
- Employ the wide range of the cognitive and practical skills based upon the versatile and specifically specialized theoretical and practical knowledge and skills for finding creative solutions of abstract problems in the field of construction as well as that of technology and designing;
- The ability to conduct the works complying with the requirements toward construction in adherence to the construction norms and rules;
- The ability to construct simple elements of the civil and industrial facilities;
- Ability to choose, assess and utilize the modern vehicles and mechanisms used in construction;
- The ability to carry out and manage constructions using modern technical means and technologies;
- The ability to identify, formulate and solve the general problems that are characteristic to construction.

Conclusion-Making Skills – the Graduates Will Have:
- The ability to obtain the required information from scientific and technical reference materials and through the internet, analyze them and make the relevant conclusions;
- The ability to appropriately and correctly realize and evaluate the risk factors existing at the time of participation in designing, construction and operation of buildings, hydro technical, construction of water systems, make and duly formulate the relevant conclusions.

Communication Skills – the Graduates Will Have:
- The ability to prepare detailed written reports concerning the ideas, existing problems and the ways of their resolution in both Georgian and foreign languages, to verbally communicate information to the industry specialists as well as to non-specialists;
- The ability to participate in reviews and discussions of various issues with the industry specialists and communicate his/her opinions clearly and in detail;
- The ability to develop business documentation using construction terminology;
- The ability to communicate his/her judgments and opinions related to construction matters in writing and draw pro and con arguments against/for those expressed by others.

Learning Skills – the Graduates Will Have:
- The ability to perform coherent and versatile assessment of his/her own educational process;
- After the completion of the educational program the graduate will have the ability to independently manage the process of his/her education and continue studies at next academic level (Master's Program) independently, employing the obtained knowledge and skills.

Values:
- The graduates will have the ability to act in adherence to the main laws of ethics, exercising both professional responsibilities of a builder and ethical responsibilities for public health and safety, giving due consideration to aesthetic values at the same time;
- The graduates will have the ability to observe professional values (accuracy, punctuality, unbiased judgment, being organized, etc.).

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. **Eristic method** is based on the gradual solution of the test 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** unites 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 4/100-point scale.

Positive grades:

- **(A)** - Excellent - the rating of 91-4/100 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

Human and material resources necessary for the implementation of the program

The program provides the appropriate human and material resources. For more information see the attached documents

Number of attached syllabuses: 90

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	**Foreign Language**		**3**							
	French for Technical Specialties – 1	N/A								
	English for Technical Specialties - 1	N/A								
	German for Technical Specialties – 1	N/A								
2	Engineering Mathematics 1	N/A	**5**							
3	Physics 1	N/A	**5**							
4	General Chemistry	N/A	**5**							
5	Basics of Programming	N/A	**6**							
6	Geodesy-1	N/A	**3**							
7	**Obligatory selective training courses**			**3**						
	7.1 History of Georgia	N/A								
	7.2 Basics of Philosophy	N/A								
	7.3 Political Science	N/A								
	7.4 Cultural Science	N/A								
	7.5 General Sociology	N/A								
	7.6 Introduction to Psychology	N/A								
	7.7 History of Technical Design	N/A								
8	Descriptive Geometry	N/A		**3**						
9	Civil Drawing	N/A		**3**						
10	**Foreign Language**			**3**						
	10.1 French for Technical Specialties – 2	French for Technical Specialties – 1								
	10.2 English for Technical Specialties - 2	English for Technical Specialties - 1								
	10.3 German for Technical Specialties – 2	German for Technical Specialties – 1								
11	Geodesy-2			**3**						
12	Engineering Mathematics 2	Engineering		**5**						

		Mathematics 1								
13	Physics 2	Physics 1		**5**						
14	Theoretical Mechanics - statics	Engineering Mathematics 1, Physics 1.1		**5**						
15	Engineering Geology and Mechanics of Soil	Engineering Mathematics 1, Civil Drawing		**3**						
16	Environment Protection and Ecology	N/A			3					
17	Foundations	Engineering Geology and Mechanics of Soil			5					
18	Computer Engineering Graphics	Basics of Programming, Civil Drawing			4					
19	Theoretical Mechanics -Dynamics	Engineering Mathematics2 Theoretical Mechanics - statics			5					
20	Strength of Materials 1	Physics 21, Theoretical Mechanics - statics			5					
21	Engineering Mathematics 3	Engineering Mathematics 2			5					
22	Building materials 1	Physics 2.1, General Chem istry			3					
23	Strength of Materials 2	Strength of Materials 1				4				
24	Hydraulics	Theoretical Mechanics - Dynamics				3				
25	Introduction to Architecture	N/A				4				
26	Building materials 2	Physics 2.1, General Chem istry				3				
27	Heat and Gas Supply and Ventilation	Physics 2.1				5				
28	The Structural Mechanics	Engineering Mathematics 2				5				
29	Statistical Methods in Construction	Engineering Mathematics				4				

		1								
30	Water supply and Wastewater	Hydraulics					5			
31	Construction Machines and Fundamentals of Automation	Building materials 2					5			
32	Bases of Construction Production	N/A					5			
33	Water Receiving Constructions	Hydraulics					5			
34	Building Strictures	Strength of Materials 2					5			
35	Labor safety in construction	N/A					5			
36	Bases of Management in Construction	N/A						5		
37	Seismic Stability of Constructions	The Structural Mechanics						5		
38	Basic of hydraulic engineering construction	Physics 2.1 The Structural Mechanics						5		
39	Sanitarian premises equipment	Hydraulics						5		
40	Building technical expertise	Building Strictures						5		
41	The technology of construction of buildings and structures	Building materials 2						5		
	Obligatory Professional selective training courses								20	10
42	Construction Production Technology	Building materials 2							5	
43	Metal constructions	Theoretical Mechanics – Building Strictures							5	
44	Design of Buildings and Constructions from Reinforced Concrete Structures	The Structural Mechanics							5	
45	Wooden and plastic constructions	The Structural Mechanics, Building Strictures							5	
46	Research and Test of Buildings and Constructions	Building Strictures								5
47	Reinforcement and regaining structure-building	Building Strictures								5
48	Systems of water feeding and distribution	Water supply and Wastewater							5	
49	Industrial and Agricultural Water Supply	Water supply and Wastewater								5
50	Water Chemistry and Microbiology	General Chem istry							5	
51	Pumps and Pumping Stations	Hydraulics, Water supply							5	

		and Wastewater								
52	Urban Drainage	Water supply and Wastewater							5	
53	Exploitation Water-Sewage Systems	Water supply and Wastewater								5
54	Hydraulics of Structures	Hydraulics, Strength of Materials 2							5	
55	Production Hydrotechnical Works								5	
56	Hydroelectric Power Plants	Engineering Mathematics 3							5	
57	Hydraulic Structures	Hydraulics								
58	Hydrology and Hydrometric	Hydraulics							5	
59	Engineering Improvement of Lands	Hydraulics							5	
60	Bachelo's project	Not less, than 120 credits of main program								10
	Free components								10	10
61	Diagnosis of Structural Damage	N/A								
62	Water resources protection	N/A								
63	Economy of Construction	N/A								
64	Fundamentals of Automation of Water Supply and Wastewater Systems	N/A								
65	Architecture of buildings	N/A								
66	Computer Programs for Designing Buildings	N/A								
67	Fundamentals of Informatics	N/A								
68	Hydrogeology	N/A								
69	Systems of water feeding and distribution	N/A								
70	basis of the economy	N/A								
71	Electrical equipment bases	N/A								
72	Fundamentals of building management	N/A								
73	Georgian Foreign Language	N/A								
74	Thermal mode of hydroconstructions and building constructions	N/A								
3/75	Water ecology	N/A								
76	Purification of natural waters	N/A								
77	Bases of design of buildings of a special purpose	N/A								

78	Hydroconstruction of waterways	N/A								
79	Underground hydraulic engineering constructions	N/A								
80	Cleaning and removal of sewage	N/A								
	Per semester		**30**	**30**	**30**	**30**	**30**	**30**	**30**	**30**
	Per year		**60**		**60**		**60**		**60**	
	Total		**240**							

Map of learning outcomes

№	Subject	Knowledge and understanding	Ability to use knowledge in practice	Making judgments	Communication skill	Ability to learn	Values
1	**Foreign Language**						
	French for Technical Specialties – 1	X	X		X	X	
	English for Technical Specialties - 1	X	X		X	X	
	German for Technical Specialties – 1	X	X		X	X	
2	Engineering Mathematics 1	X	X			X	
3	Physics 1.1	X		X	X		
4	General Chemistry	X	X		X	X	
5	Basics of Programming	X	X			X	
6	Geodesy-1						
7	**Obligatory selective training courses**						
	7.1 History of Georgia	X	X	X	X		X
	7.2 Basics of Philosophy	X	X	X			X
	7.3 Political Science	X	X	X			X
	7.4 Cultural Science	X	X	X	X	X	X
	7.5 General Sociology	X	X	X			
	7.6 Introduction to Psychology	X	X	X		X	
	7.7 History of Technical Design	X	X				X
8	Descriptive Geometry	X	X			X	
9	Civil Drawing	X	X			X	
10	**Foreign Language**						
	10.1 French for Technical Specialties – 2	X	X		X	X	X
	10.2 English for Technical Specialties - 2	X	X		X	X	X
	10.3 German for Technical Specialties – 2	X	X		X	X	X
11	Geodesy-1						
12	Engineering Mathematics 2	X	X			X	
13	Physics 2.1	X		X	X		
14	Theoretical Mechanics - statics	X	X	X		X	
15	Engineering Geology and Mechanics of Soil	X	X	X			

16	Environment Protection and Ecology	X	X				
17	Foundations	X	X	X			
18	Computer Engineering Graphics	X	X			X	
19	Theoretical Mechanics -Dynamics	X	X	X		X	
20	Strength of Materials 1	X	X	X		X	
21	Engineering Mathematics 3	X	X			X	
22	Building materials 1	X	X	X		X	
23	Strength of Materials 2	X	X	X		X	
24	Hydraulics	X	X	X			
25	Introduction to Architecture	X	X	X	X	X	
26	Building materials 2	X	X	X		X	
27	Heat and Gas Supply and Ventilation	X	X	X	X		
28	The Structural Mechanics	X	X	X			
29	Statistical Methods in Construction	X	X	X			
30	Water supply and Wastewater	X	X	X	X		
31	Construction Machines	X	X	X			
32	Bases of Construction Production	X	X			X	
33	Water Receiving Constructions	X	X	X			
34	Building Strictures	X	X	X			
35	Labor safety in construction	X	X	X			
36	Bases of Management in Construction	X	X	X			
37	Seismic Stability of Constructions	X	X	X		X	X
38	Basic of hydraulic engineering construction	X	X	X			
39	Sanitarian premises equipment	X	X			X	
40	Building technical expertise	X	X	X	X		
41	The technology of construction of buildings and structures	X	X	X			
	obligatory Professional selective training courses						
42	Construction Production Technology	X	X	X			
43	Metal constructions	X	X	X	X		
44	Design of Buildings and Constructions from Reinforced Concrete Structures	X	X	X	X		
45	Wooden and plastic constructions	X	X	X	X		
45	Research and Test of Buildings and Constructions	X	X			X	
47	Reinforcement and regaining structure-building	X	X	X		X	
48	Systems of water feeding and distribution	X	X	X	X	X	
49	Industrial and Agricultural Water Supply	X	X	X			
50	Water Chemistry and Microbiology	X	X	X	X		
51	Pumps and Pumping Stations	X	X	X			
52	Urban Drainage	X	X	X			
53	Exploitation Water-Sewage Systems	X	X	X			
54	Hydraulics of Structures	X	X	X			
55	Production Hydrotechnical Works	X	X	X	X		
56	Hydroelectric Power Plants	X	X	X			
57	Hydraulic Structures	X	X	X			
58	Hydrology and Hydrometric	X	X				
59	Engineering Improvement of Lands	X	X	X			
60	Bachelo's project	X	X	X	X	X	X
	Free components						
61	Diagnosis of Structural Damage	X	X	X		X	
62	Water resources protection	X	X		X		
63	Economy of Construction	X	X	X			
64	Fundamentals of Automation of Water Supply and	X	X		X		

	Wastewater Systems							
65	Architecture of buildings	X	X	X	X	X		
66	Computer Programs for Designing Buildings	X	X	X				
67	Fundamentals of Informatics	X	X	X				
68	Hydrogeology	X	X	X				
69	Systems of water feeding and distribution	X	X	X	X			
70	basis of the economic theory	X	X	X	X	X		
71	Electrical equipment bases	X	X	X		X		
72	Fundamentals of building management	X	X	X				
73	Georgian Foreign Language	X	X		X	X		
74	Thermal mode of hydroconstructions and building constructions		X					
3/75	Water ecology	**X**	**X**				X	
76	Purification of natural waters	**X**	**X**	X				
77	Bases of design of buildings of a special purpose	X	X			X		
78	Hydroconstruction of waterways	X	X	X				
79	Underground hydraulic engineering constructions	X	X	X				
80	Cleaning and removal of sewage	X	X			X		

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		**Foreign Language**										
	LEH12012R2	French for Technical Specialties – 1	3/75			30				1	1	43
	LEH11812R2	English for Technical Specialties - 1	3/75			30				1	1	43
	LEH11612R2	German for Technical Specialties – 1	3/75			30				1	1	43
2	MAS30908R1	Engineering Mathematics 1	5/125	15		30				1	1	78
3	PHS53808R1	Physics 1.1	5/125	15			30			1	2	77
4		General Chemistry	5/125	15			30			1	1	78
5	ICT10601R2	Basics of Programming	6/150	15		15	30			1	1	88
6	PHS44003R1	Geodesy-1										
7		**Obligatory selective training courses**										
	HEL21612R1	7.1 History of Georgia	3/75	15	15					1	1	43
	HEL31012R1	7.2 Basics of Philosophy	3/75	15	15					1	1	43
	SOS20313R1	7.3 Political Science	5/125	15	30					2	2	76
	SOS42411R1	7.4 Cultural Science	5/125	15	30					2	2	76
	SOS43612R1	7.5 General Sociology	3/75	15	15					1	1	43
	SOS31412R1	7.6 Introduction to Psychology	3/75	15	15					1	1	43

	ART20505R1	7.7 History of Technical Design	3/75	15	15					1	1	43
8	EET71205R1	Descriptive Geometry	3/75	15		15				1	1	43
9	EET71505R1	Civil Drawing	3/75			30				1	1	43
10		**Foreign Language**										
	LEH12112R2	10.1 French for Technical Specialties – 2	3/75			30				1	1	43
	LEH11912R2	10.2 English for Technical Specialties - 2	3/75			30				1	1	43
	LEH11712R2	10.3 German for Technical Specialties – 2	3/75			30				1	1	43
11	PHS44003R1	Geodesy-2										
12	MAS34/1008R1	Engineering Mathematics 2	5/125	15		30				1	2	77
13	PHS53908R1	Physics 2.1	5/125	15			30			1	2	77
14	MAS38201R	Theoretical Mechanics - statics	5/125	15		15	15			1	1	78
15	PHS30301R	Engineering Geology and Mechanics of Soil	4/100	15			15			1	1	68
16	EET20404R	Environment Protection and Ecology										
17	AAC31201R	Foundations	5/125	15		15			15	1	1	78
18	ICT10701R2	Computer Engineering Graphics	4/100			15	15			1	1	78
19	MAS38301R	Theoretical Mechanics - Dynamics	5/125	15		15	15			1	1	78
20	EET71201R2	Strength of Materials 1	5/125	15		15	15			1	1	78
21	MAS31108R1	Engineering Mathematics 3	5/125	15		30				1	2	77
22	EET71201R2	Building materials 1	3/75	15			15			1	1	43
23	EET71301R2	Strength of Materials 2	4/100	15			15			1	1	68
24	AAC30501R2	Hydraulics	5/125	15		15	15			1	1	78
25	AAC17406R1	Introduction to Architecture	4/100	15					15	1	1	68
26	AAC97101R1	Building materials 2	3/75	15			15			1	1	43
27	AAC40901R2	Heat and Gas Supply and Ventilation	5/125	15		30				1	1	78
28	EET77201R2	The Structural Mechanics	5/125	15		15			15	1	1	78
29	AAC30601R2	Statistical Methods in Construction	4/100	15		15				1	1	68
30	AAC42401R2	Water supply and Wastewater	5/125	15		30				1	1	78
31	AAC07401R1	Construction Machines	5/125	30			15			1	1	78
32	AAC30701R2	Bases of Construction Production	5/125	15	30					1	1	78
33	AAC42301R2	Water Receiving Constructions	5/125	15		30				1	1	78
34	AAC31701R2	Building Strictures	5/125	15		30				1	1	78
35	HHS20503R1											
36	AAC30701R2	Bases of Management in Construction	5/125	15		30				1	1	78
37	EET77301R2	Seismic Stability of Constructions										
38	AAC97201R1	Basic of hydraulic engineering construction	5/125	30		15				1	1	78
39	AAC42601R2	Sanitarian premises equipment	5/125	15		30				1	1	78
40	AAC07201R1	Building technical expertise	5/125	15	15				15	1	1	78

41	AAC97301R1	The technology of construction of buildings and structures	5/125	15		30				1	1	78
	obligatory Professional selective training courses											
42	AAC03/7501R1	Construction Production Technology	5/125	15		30				1	1	78
43	AAC07601R1	Metal constructions	5/125	15		15			15	1	1	78
44	AAC31601R2	Design of Buildings and Constructions from Reinforced Concrete Structures	5/125	15			15		15	1	2	77
45	AAC34/1001R2	Wooden and plastic constructions	5/125	15			15		15	1	2	77
45	AAC31101R2	Research and Test of Buildings and Constructions	5/125	15			30			1	1	78
47	AAC07701R1	Reinforcement and regaining structure-building	5/125	15		15			15	1	1	78
48	AAC98701R1	Systems of water feeding and distribution	5/125	15		15			15	1	1	78
49	AAC44/1001R2	Industrial and Agricultural Water Supply	5/125	15					30	1	1	78
50	AAC93/7501R	Water Chemistry and Microbiology	5/125	15			30			1	1	78
51	AAC41101R	Pumps and Pumping Stations	5/125	15		15			15	1	1	78
52	AAC41201R2	Urban Drainage	5/125	15					30	1	1	78
53	AAC41301R2	Exploitation Water-Sewage Systems	5/125	30		15				1	1	78
54	AAC98001R1	Hydraulics of Structures	5/125	15		15			15	1	1	78
55	AAC98101R1	Production Hydrotechnical Works	5/125	15		30				1	1	78
56	AAC94901R1	Hydroelectric Power Plants	5/125									
57	AAC95001R1	Hydraulic Structures	5/125	15		15			15	1	1	78
58	AAC95101R1	Hydrogeology	5/125	30		15				1	1	78
59	AAC95201R1	Engineering Improvement of Lands	5/125	15					30	1	1	78
60	AAC08501R	Bachelo's project	250						200	2	2	46
	Free components											
61	AAC30801R2	Diagnosis of Structural Damage	5/125	15			30			1	1	78
62	AAC95301R1	Water resources protection	5/125	30		15				1	1	78
63	SOS10601R2	Economy of Construction	5/125	15	30					1	1	78
64	AAC98201R1	Fundamentals of Automation of Water Supply and Wastewater Systems	5/125	30		15				1	1	78
65	AAC17406R1	Architecture of buildings	5/125	15					30	1	1	78
66	ICT32201R2	Computer Programs for Designing Buildings	5/125	15			30			1	1	78
67	ICT13301R2	Fundamentals of Informatics	5/125	15			30			1	1	78
68	PHS72401R1	Hydrogeology	5/125	30			30			1	1	78
69	AAC95401R1	Systems of water feeding and distribution	5/125	15		15			15	1	1	78
70	SOS11413R1	basis of the economy	**5/125**	**15**	30					2	2	76
71	EET40202R1	Electrical equipment bases	**5/125**	**15**			30			1	1	78
72	AAC95501R1	Fundamentals of building	5/125	30		15				1	1	78

		management										
73	LEH10512R3	Georgian Foreign Language	**5/125**		45					1	1	78
74	AAC96101R1	Thermal mode of hydroconstructions and building constructions	5/125	30		15				1	1	78
3/75	AAC95601R1	Water ecology	**5/125**	**15**		30				1	1	78
76	AAC95701R1	Purification of natural waters	**5/125**	**15**		30				1	1	78
77	AAC07801R1	Bases of design of buildings of a special purpose	5/125	15		30				1	1	78
78	AAC96001R1	Hydroconstructions of Waterways and Ports	5/125	30		15				1	1	78
79	AAC95901R1	Underground hydraulic engineering constructions	5/125	30		15				1	1	78
80	AAC95801R1	Cleaning and removal of sewage	5/125	15		30				1	1	78

Program Supervisor Fatima Verulashvili

Faculty of Civil Engineering
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Dean of the Faculty David Gurenidze

Approved by
Faculty of Civil Engineering
At the meeting of Faculty Board
Order №740 5 September 2012

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 Board David Gurgenidze