



Master's Educational Program

Name of the program

მშენებლობის მენეჯმენტი

Construction Management

Faculty

სამშენებლო

Construction

Program Supervisor

Professor Murman Bakradze

Qualification to award

მშენებლობის მენეჯმენტის მაგისტრი
(Master of construction management)

*მიენიჭება საგანმანათლებლო პროგრამის არანაკლებ 120 კრედიტის შესრულების შემთხვევაში
In case of implementation of no less than 120 credits of the educational program*

The language of teaching

Georgian

Precondition for admission to the program

The purpose of the educational program is training highly qualified, competitive managers, performing planning, coordination and monitoring of construction business processes, as well as designing and construction activities.

Description of the program

The program is compiled with ECTS system and includes 120 credits. 1 credit equals 25 hours. That means as a student contact and independent working hours. The distribution of credits is presented in the curriculum. The duration of the curriculum is 2 years. (4 semesters). The program consists of training and research components. Training component-75 credit program is intended for Masters 15 training courses program. The course program includes 70 credits. 5 credit- practical management of Construction company- Production practices. Research component – is intended 45 credits. Its mandatory elements are: Master Research Project/Prospectus -5 credits. Theoretical experimental research/colloquium – 10 credits. Completion and protection of master thesis- 30 credits.

In the first semester- Master Degree studies 5 credits compulsory course training program.

In the second semester- Master Degree studies compulsory 5 credit training course program and one optional 5 credit training course program. Also has Master Research Project/Prospectus, which includes 5 credits.

In the third semester – Master Degree studies three compulsory 5 credit training course program he/she runs a five-credit enterprise practice – in practical management of Construction company. It also has 10-credit theoretical-experimental research/colloquium.

In the fourth semester-Master Degree performs and conducts Master's Thesis. The Dean decides the order of the

Head of Master's Degree and the title of the master's thesis. And approves of the Faculty Board master's in accordance with the Personal Work Plan.

-Master's Personal Work Plan see the following e-mail address. http://gtu.ge/Study-Dep/Files/Pdf/mag_deb_danarTi_3_Sd.pdf

Searching component – Masters study the research component according to the topic of the Master's Thesis, which implements in Georgian Technical University and with memorandum of cooperation in the relevant organization specified by the contract.

Master Research Project/Prospectus- Master Research project-prospectus represents the outcome of review and analysis. Preliminary outline of master's thesis, master class must complete the second semester of study.

Theoretical/experimental research-colloquium- The main goal of theoretical/experimental research, is to exercise work independently by Master for solving the problematic tasks, mastering the modern methods of research, identify and solve the issues raised in the work process.

Completion and protection of qualification work – the qualification work in the main part of the research component. Completed qualification work must be represented Master's independent searching work results. In the qualification work should reflect the results obtained from theoretical/experimental research. Detail information, about the rules of evolution Research Component of Master's Educational Program see at the following email address.

http://gtu.ge/Study-Dep/Files/Pdf/mag_debul_kv1_komp_Sefa_SDwesi.pdf

Instructions for submitting paper for the Master's degree is available to see at the following email address http://gtu.ge/Study-Dep/Files/Pdf/mag_deb_danarTi%205_Sd.pdf. To get detailed information read the regulations of Dissertation Board and Doctoral Degree of Georgian Technical University. http://gtu.ge/Study-Dep/Files/Pdf/doqtorantura_debuleb_2014.10.14_SD.pdf

The purpose of the program

Masters have the right to have at least a bachelor or a person with academic level equal to him, who will be enrolled based on the results of the MA Exams (General master exam and exams examined by GTU). The tests will be published on the web page of teaching department of GTU <http://www.gtu.ge/study/index.php> All least one month before the exams start. Enrollment on the program without passing the Master's Exams is possible by the rule established by the Ministry of Education and Science of Georgia.

Learning Outcomes and Competences (General and Sectoral)

Knowledge and Understanding – The graduate will have deep and systematic knowledge of modern theoretical aspects of construction management, as of the art of management, enabling him/her to develop new original ideas in the process of assessment and analysis of both the internal and external environment of the organization;

Is familiarized with the Budget Code of Georgia, general budgeting system regulatory norms of the country and distribution of inputs between the budgets, enabling him/her to develop new original ideas in the process of forming a multilevel state budget.

Has understanding of theoretical and methodological aspects of the relations between the units participating in investment complexes, as well as all the functions, duties and responsibilities of a manager at all levels at any stage of producing construction products and implementation of investment projects; the role of construction business, financial and managerial accounts as well as of innovations in effective management of projects; the system of assessment of market cycles and investment projects of the investment market; criteria determining immovable property costs and rights and obligations of the parties involved in the mentioned processes.

Ability to use the Acquired Knowledge and Skills in Practice – the graduates will be able to: manage the processes of formation and expenditure of financial resources in construction companies; perform monitoring of business projects and post-implementation audit; development of complex measures aiming at evaluation and solving of individual problems existing in management; assessment of the market environment existing in the field of construction and employment of highly professional managerial skills in practical marketing to full extent thereof; anti-crisis management and control of construction processes in new, unpredictable and multidisciplinary environments; independent modeling of the decision-making process and searching new and original ways aiming at increasing the reliability of the outcomes reached in the process using the latest methods and approaches.

Conclusion-Making Skills – the graduates will have: the ability to formulate substantiated conclusions based upon critical analysis of the incomplete information on the costs of the construction resources related to the costs of investment activities during the construction designing; the ability to develop critical conclusions and recommendations on individual stages of budget process formation and procedural issues thereof aiming at creation of a successful budget system.

Communication Skills – the graduates will have: the ability to communicate his/her conclusions, arguments and research methods in the field of construction management to both academic and professional circles both in the Georgian and foreign languages; the ability to prepare and develop written detailed, laconic and orderly formulated ideas, project proposals, progress reports and the final report and their presentation to large audience.

Learning Skills – the graduates will have: the ability to independently conduct the process of learning construction management and understanding its specifics; the ability to define and plan the directions in his/her study process at a high level, aiming at furthering his/her professional knowledge and enriching the experience; the ability to share the experience of the marketing schools acting in the leading foreign countries, aiming at further refining his/her knowledge acquired in the course of the studies and internship in the theory of marketing; the ability to independently get acquainted with and learn the latest achievements maintained in various libraries worldwide as well as spread through the internet.

Values – the graduates will have: the ability to identify the levels of knowledge, skills and initiatives existing at all levels of managerial activities, management as well as of employees employed in all segments of a construction company and having share in establishing values in business processes; the ability to evaluate his/her own and others' attitudes toward the issues of furthering the procedures of collection of and levying taxes aiming at elimination of the defects existing in the tax system and formation of an image of a fair society of the state financial policy, as well as the ability of protection of professional values.

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.

The work is not enough and he/she has to learn the subject from the beginning. Training Course Programs(Syllabus) are given the descripton of the criteria and scales of the relavent forms of student knowledge.

Evaluation procedure of the research component of the Master’s Educatonal Program is given on the University website.

Field of employment

- State, governmental institutions and agencies (Ministries, Departments).
- Municipal self-governing bodies, City Hall Supervision and Improvement offices
- State and private property based in local and foreign companies (firms, commercial Banks, corporations, insurance and intermediate-distribution companies, investment funds)
- Scientific analytical structures;
- International organization;
- In the non-governmental sector;
- Audit firms;
- Tax and financial control agencies.

Opportunity to continue learning

Doctoral 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 syllables: 27

Program Study Load

Nº	Course Title	Precondition of admit	ECTS Credits			
			I Year		II Year	
			Semester			
			I	II	III	IV
1	Elective courses Business communication		5			
1.1.	Business communication (in English)	N/A				
1.2.	Business communication (in French)					
1.3.	Business communication (in German)					
1.4.	Business communication (in Russian)					
2	Elective Course: Theory and Practice of Specialized Translation	N/A		5		

2.1.	Theory and Practice of Specialized Translation (English)	N/A				
2.2.	Theory and Practice of Specialized Translation (French)	N/A				
2.3.	Theory and Practice of Specialized Translation (Germany)	N/A				
2.4.	Theory and Practice of Specialized Translation (Russian)	N/A				
3.	Project Management in Construction	N/A	5			
4.	Marketing of Management	N/A	5			
5.	International Standard in Accounting Calculation and Plural Accounts	N/A	5			
6	Elective Course:		5			
6.1.	Building variant technological design	N/A				
6.2.	House building monolithic technology	N/A				
6.3.	Building Construction (special course)	N/A				
6.4.	Architectural and Construction Legislation and Normative documents	N/A				
7.	Human resources Management	N/A	5			
8	Elective Course:	N/A		5		
8.1.	Taxation policy	N/A				
8.2.	Federal budget and fiscal politics	N/A				
8.3.	Economic and management of urban thrift	Project management in Construction				
8.4.	The business plan of construction	Project management in Construction				
9.	Operations Management in Construction	N/A		5		
10.	Investment Appraisal and Financial Decisions	N/A		5		
11.	Risk Management in Construction	N/A		5		
12.	Estimation and Audit of Real Estate	N/A			5	
13.	Strategic Management	N/A			5	
14.	Logistics	Project management in Construction			5	
15.	Construction Company Practical Management - Industrial Practices	Project management in Construction			5	
Per semester			30	25	20	-
Total:				75		
Research Component:						
	Master Research Project / Prospectus			5		
	Theoretical / experimental research / colloquium				10	
	Accomplishment and Defense of Master's Thesis					30
Total per semester:			30	30	30	30

	Total per year:	60	60
	Total:	120	

Map of learning outcomes

№	Course Title	Knowledge and understanding	Ability to use knowledge in practice	Making judgments	communication skill	ability to learn	Values
1	Elective courses						
	Business communication						
1.1.	Business communication (in English)	X	X		X	X	X
1.2.	Business communication (in French)	X	X		X	X	X
1.3.	Business communication (in German)	X	X		X	X	X
1.4.	Business communication (in Russian)	X	X		X	X	X
2	Elective Course: Theory and Practice of Specialized Translation						
2.1.	Theory and Practice of Specialized Translation (English)	X	X	X	X		
2.2.	Theory and Practice of Specialized Translation (French)	X	X	X	X		
2.3.	Theory and Practice of Specialized Translation (Germany)	X	X	X	X		
2.4.	Theory and Practice of Specialized Translation (Russian)	X	X	X	X		
3.	Project Management in Construction	X	X		X		X
4.	Marketing of Management	X	X			X	X
5.	International Standard in Accounting Calculation and Plural Accounts	X	X				X
6	Elective Course:						
6.1.	Building variant technological design	X	X	X	X		
6.2.	House building monolithic technology	X	X	X			
6.3.	Building Construction (special course)	X	X		X		
6.4.	Architectural and Construction Legislation and Normative documents	X	X		X		
7.	Human resources Management	X		X	X		X
8	Elective Course:						
8.1.	Taxation policy	X	X			X	X
8.2.	Federal budget and fiscal politics	X	X	X			X
8.3.	Economic and management of urban thrift	X	X	X		X	
8.4.	The business plan of construction		X	X	X	X	
9.	Operations Management in Construction	X	X	X		X	
10.	Investment Appraisal and Financial Decisions	X	X				X
11.	Risk Management in Construction	X	X	X			X
12.	Estimation and Audit of Real Estate	X	X	X			
13.	Strategic Management	X	X	X	X		
14.	Logistics	X	X	X		X	

15.	Construction Company Practical Management - Industrial Practices	X	X				X
Research Component:							
	Master Research Project / Prospectus	X	X	X	X	X	X
	Theoretical / experimental research / colloquium	X	X	X	X	X	X
	Accomplishment and Defense of Master's Thesis	X	X	X	X	X	X

Program curriculum

№	Course code	Course Title	ESTS credits / hours	Hours								
				Lecture	Seminar (work in the group)	Practical classes:	Laboratory	Practice	Course paper / project	Mid-semester exam	Final exam	Independent work
1		Elective course: Business communication										
1.1.	BSC0007GA3-P	Business communication (in English)	5/125			45				1	1	78
1.2.	BSC0007GA3-P	Business communication (in French)	5/125			45				1	1	78
1.3.	BSC0007GA3-P	Business communication (in German)	5/125			45				1	1	78
1.4.	BSC0007GA3-P	Business communication (in Russian)	5/125			45				1	1	78
2		Elective Course: Theory and Practice of Specialized Translation	5/125							1	1	78
2.1.	TPT0007GA1-LP	Theory and Practice of Specialized Translation (English)	5/125	15		30				1	1	78
2.2.	TPT0007GA1-LP	Theory and Practice of Specialized Translation (French)	5/125	15		30				1	1	78
2.3.	TPT0007GA1-LP	Theory and Practice of Specialized Translation (Germany)	5/125	15		30				1	1	78
2.4.	TPT0007GA1-LP	Theory and Practice of Specialized Translation (Russian)	5/125	15		30				1	1	78
3.	PRJMC01GA1-LS	Project Management in Construction	5/125	15	30					1	1	78
4.	MARKM01GA1-LS	Marketing of Management	5/125	30	15					1	1	78
5.	ACCOU01GA1-LP	International Standard in Accounting Calculation and Plural Accounts	5/125	15		30				1	1	78
6		Elective Course:	5/125							1	1	78
6.1.	BVTDE01GA1-LS	Building variant technological design	5/125	30	15					1	1	78
6.2.	HBMTE01GA1-LS	House building monolithic technology	5/125	30	15					1	1	78
6.3.	BCSPC01GA1-LP	Building Construction (special course)	5/125	15		30				1	1	78
6.4.	LEPAC06GA1-LS	Architectural and Construction Legislation and Normative documents	5/125	30	15					1	1	78
7.	COPEM01GA1-LS	Human resources Management	5/125	30	15					1	1	78
8		Elective Course:	5/125							1	1	78
8.1.	TXTSL01GA1-LS	Taxation policy	5/125	15	30					1	1	78
8.2.	FEBFP01GA1-LS	Federal budget and fiscal politics	5/125	30	15					1	1	78
8.3.	ECMUR01GA1-LP	Economic and management of urban	5/125	30		15				1	1	78

		thrift										
8.4.	BPBUC01GA1-LP	The business plan of construction	5/125	15		30				1	1	78
9.	OPEMC01GA1-LS	Operations Management in Construction	5/125	15	30					1	1	78
10.	IAFDC01GA1-LP	Investment Appraisal and Financial Decisions	5/125	30		15				1	1	78
11.	RSKMC01GA1-LP	Risk Management in Construction	5/125	15		30				1	1	78
12.	EARES01GA1-LS	Estimation and Audit of Real Estate	5/125	15	30					1	1	78
13.	STRMN01GA1-LS	Strategic Management	5/125	15	30					1	1	78
14.	LOGIS01GA1-LS	Logistics	5/125	30	15					1	1	78
15.	INPRC01GA1-R	Construction Company Practical Management - Industrial Practices	5/125					45		1	1	78

Program Supervisor

Murman Bakradze

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