



საქართველოს ტექნიკური უნივერსიტეტი
GEORGIAN TECHNICAL UNIVERSITY

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Doctoral Education Program

Program Title

არქიტექტურა

Architecture

Faculty

არქიტექტურის, ურბანისტიკის და დიზაინის ფაკულტეტი

Faculty of Architecture, Urban Planning and Design

Head of the Program

Associate Professor Medea Melqadze

Qualification to be Granted

არქიტექტურის დოქტორი

მიენიჭება საგანმანათლებლო პროგრამის არანაკლებ 180 კრედიტის შესრულების შემთხვევაში

Doctor in Architect

Will be granted in case of fulfilling not less than 180 credits of the educational program

Language of Studying

Georgian

Preconditions of Admission

Master's degree or equivalent academic degree diploma;

The following will be taken into account: the existence of scientific publications; participation in scientific conferences; teaching/research related activities other documents or materials (certificates, diplomas and so on). Interviews with faculty.

Description of the program

The program is designed according to ECTS system, 1 credit is equal to 25 hours, which means contact and independent work hours. The credit distribution is presented in the program curriculum. The Doctoral Educational Program consists of a study and research component and is completed by a Dissertation Thesis defense.

Educational Program continues 3 Years (6 semesters) and ends graduate PhD degree thesis. One semester consists of 20 weeks, 15 study weeks (educational studies), exam 4 week (final

and additional exams), also one midterm exam week.

The total doctoral program includes 180 credits: one academic year - 60 credits, 30 credits in the semester.

The study component of Doctoral Program aims at developing doctoral and methodological skills, it facilitates and helps the doctoral student in performing the dissertation work, prepares for future pedagogical and scientific activities. The program research component aims at deepening the practical skills of conducting independent research of scientific research, thus forming and developing professional research culture. The total number of credits of the academic component "architecture" in the Doctoral Educational Program is 60 credits ("Academic Writing and Science Research Methods" – 5 credits, "The methods of study" – 5 credits, "Professor's Assistance" – 5 credits, "Art of Architecture" – 10 credits, "Space, Form, Composition" – 5 credits, "The first thematic seminar" – 15 credits, "The second thematic seminar" – 15 credits), and the total number of credits for research components - 120 credits. ("Project of the thesis research/prospectus- 1" – 10 credits, "Project of the thesis research/prospectus- 2" – 20 credits, "Theoretical /Experimental research/ Colloquium – 1" – 15 credits, "Theoretical /Experimental research/ Colloquium – 2" – 15 credits, "Theoretical /Experimental research/ Colloquium – 3" – 30 credits, "Completion of the thesis, defense" – 30 credits.)

In the program study component the student's learning outcome evaluation level includes midterm and final assessment. Each form and component of evaluation from the overall point of the evaluation (100 point) defined has the specific part in the final assessment, particularly, final exam 40 points (minimum positive point for final evaluation is 20), and maximum point of the interim assessment - 60. In addition, intermediate assessment includes 2 components: intermediate exam and current activity assessment (testing, practical / theoretical performing homework, activity on the seminar and etc.). Midterm exam assessment necessary component is, maximum 30, minimum positive assessment 15. The maximum assessment of current activity is 30, minimum total positive assessment - 15 points.

Evaluation of the research component happens once, with the final assessment. Maximum assessment 100 points, minimum positive assessment 51. The Main part of research component is dissertation defense. Doctoral student is allowed to pass dissertation thesis if it has completely fulfilled all other components provided by the educational program. Do not have academic and financial debts, during the fifth semester doctoral student presented work performed by him at that time, at the enlarged session of the academic department. At the enlarged session of the academic department he made a report on thesis (preliminary protection), accordance with the doctoral definition of the GTU presented to the Council certificate, Which is confirmed the absence of plagiarism of the work by the appropriate conclusion. Presented copies of the completed dissertation and abstract signed by the scientific supervisor (hereinafter the supervisor). The thesis protection is held publicly, at the University Dissertation Board session or at the dissertation board according to the Faculty decision.

The PhD program "Architecture" is in compliance with the provision of Doctoral Degree studies,

approved by the Decree No. 01-05-04 / 44 of the Technical University of Georgia, March 9, 2018. The provision of Doctoral Degree studies of Technical University of Georgia is available at the University website, at:

http://gtu.ge/Study-Dep/Files/Pdf/doq_debuleba_18_SD.pdf

The study and research components of Doctoral Education Program and the evaluation procedure are available at:

http://gtu.ge/Study-Dep/Files/Pdf/doq_debul_dan3_%2007_2017_SD.pdf

The aim of the Educational Program

The aim of the program is to prepare the specialist being able to: perform highly professional analytical researches and work in the field of architecture; Profound scientific study and analysis of architectural problems; make reasonable judgment, conduct correct and objective discussion; perform relevant pedagogical activity: deliver lectures and practical activities, supervise bachelor, master and doctoral programs.

Outcomes of the Educational Program (General and Sectoral)

Knowledge and understanding

After completion of the course the student will have: the knowledge based on the achievements in the field of architecture, enabling the application of innovative methods. Re-apprehension of the accumulated knowledge and partial rethinking of the events and their apprehension.

Ability to use knowledge in practice

After completion of the course the student will have the ability: to plan independently and perform researches by using innovative, analytical methods in the field of architecture; to elaborate the energy saving projects and applying new technologies in constructing; to publish the outcomes of the research in international referential scientific publications; to perform pedagogical and practical activities on the basis of the accumulated knowledge.

Making judgments

After completion of the course the student will have: analytical and logical thinking. Critical analysis, synthesis and evaluation of complex, novel and contradictory ideas; data interpretation; formation of aims of criteria; independent adoption of effective and proper solution to the problem; the ability of making reasonable judgment on the basis of the critical analysis of the existing information and delivering practical recommendations.

Communication Skill

After completion of the course the student will be able:

To write laconically, clearly and observing grammatical rules. To evade complex language and compose logical, coherent written construction; to make a detailed written report on ideas, existing problems and the ways of solving them; to perform public speeches and oral interaction on the problems.

Ability to learn

After completion of the course the student will be able to: conduct studies independently, to be open to comprehend new ideas in the process of professional activity. To evaluate own learning process consistently and multilaterally.

Values

After completion of the course the student will be able to: make own contribution in establishing new values, evaluating own or other people's attitude towards values. Observe professional values, ethical and moral norms; analyze historical-cultural values.

Methods of achieving learning outcomes (teaching and learning)

Lecture Seminar (work in group) Practical Laboratory Scientific-thematic seminar Independent work Consultation research component doctoral paper Doctoral dissertation

Due to the specifics of the specific course in the learning process, used for teaching and learning methods is in the following activities, which is reflected in the relevant training courses (syllabus):

1. Discussion / debate are one of the most common activities of interactive teaching. Discussion process increases the quality and activity of students' engagement. Discussion can be turned into arguments and this process is not limited to the questions asked by the teacher. It develops the ability of the student to reason and justify their opinion.
2. Implication. It is quite effective in terms of achieving the result. In many cases, it is better to provide the students with audio and visual materials simultaneously. The study material can be demonstrated by both the teacher and the student. This activity helps us to demonstrate different levels of learning material, to specify what students will have to do independently; at the same time, this strategy visually reflects the essence of the topic/ problem. Demonstration may be simple.
3. Problem based learning is an activity which uses a specific problem as the initial stages of obtaining new knowledge and integration process.
4. Case study - the teacher will discuss concrete cases with the students, and study the issue thoroughly. For example, in the safety of engineering, it can be a case of a particular accident or disaster, in the political science - concrete, for example, the Karabakh problem (Armenia-Azerbaijan conflict) analysis and etc.
5. 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.

6. Deduction is such a form of transmitting any knowledge, which based on general knowledge represents logical process of discovering new knowledge in other words, the process is going from general to concrete.
7. Analysis helps us to divide the study material into constituent parts. This will simplify the detailed coverage of individual issues within a difficult problem.

8. The synthesis implies the composition of one whole by grouping individual issues. This activity contributes to the development of the problem to be seen as a whole.
9. Verbal or orally transmitted. Narration, talking and so forth belong to this activity. In this process the teacher orally transmits and explains study material and the students actively perceive and learn it through listening, remembering and thinking.
10. Action-oriented training requires active involvement of the teacher and student in the teaching process, where the practical interpretation of theoretical material is of special significance.
11. The script implies the following activities: making extracts, records, notes, theses, abstract or essay and other.
12. Explanation is based on the discussion on the issue. The teacher gives a concrete example from the material, which is discussed in detail within the given topic.
13. Project planning and presentation. When working on the project, the student uses the acquired knowledge and skills to solve the real problem. This increases students' motivation and responsibility. Working on the project includes planning, surveying, practical activity and the performance of the results in accordance with the selected issue. The project will be deemed implemented if its results are presented in a clear and convincing way. It can be performed individually, in couples or in groups; also within a subject or within a few subjects (integration of the subjects); after completion, the project can be presented to a big audience.

Student knowledge assessment system

Assessment by a 100 degree scale.

As the positive grades are considered:

- (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.

Scientific-Research Component / Components Assessment:

a) Excellent (summa cum laude) – Excellent thesis;

b) Very good (magna cum laude) – A result that exceeds the requirements in every way;

c) Good (cum laude) – A result that exceeds the requirements;

d) Intermediate (bene) – Result, which fully comply with the requirements;

e) Satisfactory (rite) – The result that, despite the shortcomings, still meets the requirements;

f) Unsatisfactory (insufficenter) – A result that does not meet the requirements due to significant

deficiencies;

g) Completely unsatisfactory (sub omni canone) –The result that does not meet the requirements at all.

See assessment forms, methods, criteria and scales in the syllabus and the doctoral program of educational and

research components estimation rule.

The Field of Employment

- **Local self-government permits, Regulatory and controlling organizations
National line Ministries and Agencies;**
- **City Urban Planning service;**
- **Environmental service;**
- **Architectural and Design Projecting Organizations;**
- **Greening and amenities service;**
- **Architectural-Construction development companies;**
- **Mass Media and Advertising Companies;**
- **Scientific and Research and Training and Education Organizations.**

Human and Material Resources Necessary for the implementation of the Program

The Program provides the appropriate human and material resources.

The Program has adequate financial resources:

- The multimedia-equipped computer lab;
- Special equipment and machinery (Anemometer with wings (ACO-3), aspiration psicometer (MB-4M), luksmeter (IO-16), aktinometer, piranometer, albedometer, galvanometer amplifier (Φ 5031), a sound generator, the study of (ΓΕΣΙΜ- 75), termograph, gigo graph, wind direction and velocity of the stationary measuring amperemetre (ЗТП-М), Autotransformer (АОСК - 0,4172), auto compensation micro volt ano ampere (P 325), integrative DVM (B2-23), block (AK. 6ПВ.367.294), electric measuring pliers (ИІ90), constant current potentiometers (КП-59, Class 0,05)) for physics laboratory of architecture;
- GTU Central Scientific and the Faculty Library;
- Educational-Scientific and Design Center for Facilitating Architectural Education.
- The given Program is served by full professors and associate professors, Among them invited professors:

1	Giram Abuladze	10	Tengiz makharashvili	19	Vakhtang Pirckhalava
2	Qetevan Berekashvili	11	Medea Melkadze	20	Marika Pochkhua
3	Bidzina Berishvili	12	Irakli Murgulia	21	Natia Qochladze
4	Levan Beridze (invited)	13	Vanda Mujiri	22	Nino Chachava
5	Merab Bolkvadze (invited)	14	Valeri Mchedlishvili	23	Tinatin Chigogidze
6	Savid Bostanashvili	15	Gia Natsvlishvili	24	Giorgi Tskhovrebashvili
7	Nino Imnadze	16	Otar Nakchucrishvili	25	Giorgi Tsulukidze
8	Marine Maisuradze	17	Giorgi Salukvadze	26	Nino Khabeishvili
9	Mariam malaguradze	18	Zurab Titvinidze	27	Nugzar Khvedeliani

Among them professor of Georgian Technical University Revaz Dzneladze.

The program is attached to the Program Implemented Persons, including the CV Head of the program.

Number of attached syllables: 4

Program Study Load

№	Educational components	Precondition of admit	ECTS credits					
			I year		II year		III year	
			semester					
			I	II	III	IV	V	VI
1	Academic Writing and Science Research Methods	does not have	5					
2	The methods of study	does not have	5					
3	Professor's Assistance	does not have		5				

4	Art of Architecture	does not have	10					
5	Space, Form, Composition	does not have		5				
6	The first thematic seminar	does not have			15			
7	The second thematic seminar	The first thematic seminar				15		
research components								
1	Project of the thesis research/prospectus- 1	does not have	10					
2	Project of the thesis research/prospectus- 2	Project of the thesis research/prospectus- 1		20				
3	Theoretical /Experimental research/ Colloquium - 1	Project of the thesis research/prospectus- 2			15			
4	Theoretical /Experimental research/ Colloquium - 2	Theoretical /Experimental research/ Colloquium - 1				15		
5	Theoretical /Experimental research/ Colloquium - 3	Theoretical /Experimental research/ Colloquium - 2					30	
6	Completion of the thesis, defense	All mandatory study and research component						30
Total per year			60		60		60	
total:					180			

Map of learning outcomes

N ^o	Educational components	Knowledge and understanding	Ability to use knowledge in practice	Making judgments	Communication skills	Learning Skills	Values
1	Academic Writing and Science Research Methods	+	+	+	+		
2	The methods of study	+	+	+	+		+
3	Professor's Assistance	+	+	+	+	+	+
4	Art of Architecture	+	+	+	+	+	+
5	Space, Form, Composition	+	+	+	+		+
6	The first thematic seminar	+	+	+	+	+	+
7	The second thematic seminar	+	+	+	+	+	+
research component							
1	Project of the thesis research/prospectus- 1	+	+	+	+	+	+

2	Project of the thesis research/prospectus- 2	+	+	+	+	+	+
3	Theoretical /Experimental research/ Colloquium - 1	+	+	+	+	+	+
4	Theoretical /Experimental research/ Colloquium - 2	+	+	+	+	+	+
5	Theoretical /Experimental research/ Colloquium - 3	+	+	+	+	+	+
6	Completion of the thesis, defense	+	+	+	+	+	+

Program curriculum

№	Code of the Subject	Educational component	ESTS credits/hour	hour						
				Lecture	Seminar (working in group)	Practical	Laboratory	Mid-semester exam	Final exam	Independent work
1	HEL10712G1	Academic Writing and Science Research Methods	5/125	15	30			2	2	76
2	EDU10912G1	The methods of study	5/125	15	30			2	2	76
3	AAC18106G1	Art of Architecture	10250	75				2	2	171
4	AAC18206G1	Space, Form, Composition	5/125	45				2	2	76

Head of the Program

Medea Melkadze

Faculty of Architecture, Urban Planning and Design
Head of Quality Assurance Service

Nino Khabeishvili

Dean of the Faculty

Nino Imnadze

Approved by

Faculty of Architecture, Urban Planning and Design
At the meeting of Faculty Board
03.07.2012
Chairman of the Faculty Board

Agreed with

Quality Assurance Service of GTU

Irma Inashvili

Modified by

Faculty of Architecture, Urban Planning and Design
At the meeting of Faculty Board (N30)
29.03.2018
Chairman of the Faculty Board

Nino Imnadze