

Faculty of Architecture, Urban planning and Design

Scientific works implemented in 2018-2023 (by years)

1. Monographs / books / textbooks:

- 1) **T. Chigogidze; Design of Interior**; Georgian Technical University; 2018; ISBN 978-9941-28-025-2.

Annotation: The textbook of interior design was created under the influence of historical events, a huge number of people and various trends. But to say that interior design is a finished phenomenon is wrong. Art cannot stop, it develops, changes regularly, acquires new forms. The textbook discusses the main features of the interior, the features of the functional and spatial arrangement and compositional formation, as well as the compositional principles and elements of the interior.

- 2) **T. Chigogidze; Design of Interior (in Russian language)**; Georgian Technical University; 2018; ISBN 978-9941-28-013-9 (PDF).

Annotation: The textbook of interior design was created under the influence of historical events, a huge number of people and various trends. But to say that interior design is a finished phenomenon is wrong. Art cannot stop, it develops, changes regularly, acquires new forms. The textbook discusses the main features of the interior, the features of the functional and spatial arrangement and compositional formation, as well as the compositional principles and elements of the interior.

- 3) **T. Chigogidze; Interior Styles (in Russian language)**; Georgian Technical University; 2018; ISBN 978-9941-20-996-3 (PDF).

Annotation: The textbook examines epochal, ethnic, and thematic stylistic trends of the interior of buildings, their features and stages of development. As well as the use of furniture and accessories in accordance with different stylistic solutions.

- 4) **T. Chigogidze; Textiles and Accessories Architectural Design (in Russian language)**; Georgian Technical University; 2018; ISBN 978-9941-20-983-3 (PDF).

Annotation: The textbook examines different forms of textile existence in architecture and design of external and internal spaces. Textiles are used for enclosing structures and filling the interiors of capital buildings, pre-erected movable structures, temporarily used pavilions, tents and light shelters. Soft materials are widely used in manufacturing, agriculture, advertising, festive decoration, etc.

- 5) **Giorgi Tsulukidze; Basics of ergonomics**, 2018; Tbilisi, GTU
ISBN 978-9941-28-126-6

Annotation: The lecture course discusses and reviews the subject of ergonomics and its main areas - anthropometry, engineering psychology, occupational physiology and occupational hygiene.

The aim of the course is to help students learn how to properly understand ergonomics as a scientific discipline, fully master the teaching materials and use them in practice (design).

The material of the lectures is intended for the Faculty of Architecture, Urbanism and Design of the Georgian Technical University - for undergraduate and graduate students who are studying the course of ergonomics in the course of their studies.

- 6) **Giorgi Tsulukidze; Ergonomic (in Russian)**, 2018; Tbilisi, GTU
ISBN 978-9941-28-121-1

Annotation: The lecture course discusses and reviews the subject of ergonomics and its main areas - anthropometry, engineering psychology, occupational physiology and occupational hygiene.

The aim of the course is to help students learn how to properly understand ergonomics as a scientific discipline, fully master the teaching materials and use them in practice (design).

The material of the lectures is intended for the Faculty of Architecture, Urbanism and Design of the Georgian Technical University - for undergraduate and graduate students who are studying the course of ergonomics in the course of their studies.

- 7) **Giorgi Tsulukidze; Furniture design**, 2018; Tbilisi, GTU; ISBN 978-9941-28-120-4

Annotation: The book is devoted to the basic principles of furniture design, history, stages of development and styles of furniture design.

The course material is designed to teach students individual and complex furniture design for interiors with different functions.

"Furniture Design" is designed for students of the Faculty of Architecture, Urban Planning and Design of Georgian Technical University, who are taking a training course in furniture design in the process of study.

- 8) Nino Imnadze

"Theory and practice of Architecture, Research-generalization"

Lecture course." GTU, Publishing house `teqnikuri universiteti~, ISBN 978-9941-28-022-1 (PDF); <http://www.gtu.ge>

Tbilisi 2018

Annotation: the lecture course discusses the theory of architecture and the practice of its interpretation, the basic concepts of modern architecture and the possibility of using one or another theoretical approach when analyzing a particular object. Special attention is paid to the psychological and social aspects of architectural creativity. The lecture course covers such issues as: creative hypotheses, tradition and modernity, regionalism in architecture, factor of historicism in XXI century architecture, new building in historical and landscape environment; context and contrast, industrial archeology, etc. The thesis is intended for graduate students of the Faculty of architecture, urbanism and design of GTU. It will also benefit interested persons.

- 10) **Vakhtang Pirtskhalava, George Mukhiashvili; Structures in Architecture (Part II)**

Publisher Technical University, Tbilisi 2018; ISBN 978-9941-28-018-4

Annotation: The lecture course covers the basic architectural and constructional systems and layout schemes of civil buildings. The construction systems used in multi-story and high-rise residential and public buildings, as well as modern facade systems and materials, are thoroughly analyzed. Examples of implemented architectural objects are presented, including the junctions of facade and constructional elements composition. It is intended for students of the Faculty of Architecture.

12) **M. Pochkhua; Methodological reference book;** Small settlement (1000 inhabitants)

Publishing House "Technical University" 2018. ISBN 978-9941-26-312-3.

Annotation: The goal of the reference book is to give the student the opportunity to apply the knowledge gained in the theory of urban planning in practice.

The design assignment aims to design a small urban-type settlement for 1000 inhabitants, taking into account the important topographical, natural-climatic features of the specific landscape.

13) **G.Natsvlishvili; Architectural constructions of industrial buildings;** © Sagamomcemlo saxli "Teqnikuri university", 2018; ISBN 978-9941-28-009-2 (PDF); <http://www.gtu.ge>

Annotation: The purpose of the lecture course is to introduce students to the architectural constructions of industrial buildings, the elements of these constructions and their connecting nodes. Illustrative material is attached to the lecture course, examples of planning and construction solutions of industrial buildings are given. and constructive solution examples.

The lecture course is intended for students of the Faculty of Architecture and Construction.

19) **M. Davitaia, M. Dzidziguri, "architectural criticism-methodology of architectural research"**, methodical reference, publishing house "Technical University", 2018, ISBN 978-9941-28-317-8, 51 p.

Annotation : Methodical reference on the topic: "architectural criticism - methodology of architectural research "is intended for students of the master's program" architectural studies " of the Faculty of architecture, urbanism and design.

Architectural criticism contains the main theoretical and methodological aspects of architectural-critical work and presents modern methods and approaches to "Architectural Science". Architectural-historical research is the part of architectural studies, when performing which the graduate student is able to actually apply the obtained theoretical knowledge in the aspect of architectural criticism. The methodical reference discusses the basics of architectural-historical research methodology, defines the works to be carried out for comprehensive research (the list includes seven items), which is based on the law of Georgia on cultural heritage (2007).), Article 43, assessed and substantiated the importance of a graduate student performing such work for the formation of a professional architecture critic. The presented methodical reference will help them complete the task. The work presents several architectural-historical research samples performed by the authors of the methodical reference and graduate students.

20) **Dzidziguri M.**

"Architectural Criticism-Architectural Research Methodology"

publishing house "Technical University of Georgia", 2018, ISBN 978-9941-28-317-8

Annotation

Architectural-historical research is the part of architectural science, during the performance of which the master's student has the opportunity to actually use the acquired theoretical knowledge in the aspect of architectural criticism. The methodical guideline discusses the basics of the architectural-historical research methodology, defines the works for the fully conduct of the research (the list includes seven items), which is based on the Law of Georgia on Cultural Heritage (2007), Article 43, evaluates and substantiates the importance of performing such works by the master's student as a professional architect to form a critic.

For more visibility, the paper presents several architectural-historical research samples performed by the authors of the methodological guideline and also by the master's student.

21) **Gia Natsvlishvili**

architectural constructions of industrial buildings;

© sagamomcemlo saxli `teqnikuri university', 2018

ISBN 978-9941-28-009-2 (PDF)

<http://www.gtu.ge>

Annotation: The purpose of the lecture course is to introduce students to the architectural constructions of industrial buildings, the elements of these constructions and their connecting nodes. Illustrative material is attached to the lecture course, examples of planning and construction solutions of industrial buildings are given. The lecture course is intended for students of architecture and construction faculties

2019

22. **T. Chigogidze; Methodological Recommendations for the Implementation of the Course Project "Interior Design 2";** Georgian Technical University; 2019; ISBN 978-9941-28-429-8 (PDF).

Annotation: In the methodical reference, the design stages of the interior of public buildings, in particular the cafe-restaurant, the constructions used in it, the recommended materials, etc., are established. In order to better understand the requirements for space, the furniture placement in the catering facility, including distances and other ergonomic schemes, are provided. The composition of the project is described in detail.

23. **T. Chigogidze; Methodological Recommendations for the Implementation of the Course Project "Interior Design 3";** Georgian Technical University; 2019; ISBN 978-9941-28-430-4 (PDF).

Annotation: In the methodical reference, the issues of the interior design of kindergartens are discussed, the sequence of the planning solution of the course project and the algorithm of technical design are given. The goal, objectives and composition of the project are established. It features common types of kindergartens, separate storage rooms, detailed diagrams, and colorful illustrations that make it easy to understand.

24) **George Mukhiashvili, Vakhtang Pirtskhalava; Structures in Architecture (Part I)**

Publisher Technical University, Tbilisi 2019

ISBN 978-9941-28-544-8

Annotation: The lecture course covers the basic architectural and constructional systems and elements of civil buildings. The construction systems used in residential and public buildings, as well as modern facade materials, are thoroughly analyzed. Examples of architectural elements are presented, including the placement of facade and constructional elements. This publication is intended for students of the Faculty of Architecture, Urban Planning and Design.

25) **M. Pochkhua; Methodological reference book; Smart city for 20 000 inhabitants**

Publishing House "Technical University"2019. 721.011.1,ISBN 978-9941-28-2

Annotation: The purpose of the help guide is to make it easier for students to apply theoretical knowledge in practice. It is intended for students of architecture and urban planning. The student is tasked with drawing up a general plan of the city for 20,000 inhabitants, on the basis of which the main parameters of the use (land use) and development of the populated area, the conditions of amenities, aspects of the development of transport, engineering and social infrastructure are determined.

2020

- 26) **G. Gegelia, B. Tinikashvili; lecture course - "Building reconstruction, regeneration, adaptation";** Georgian Technical University; 2020; ISBN 978-9941-28-178-5 (PDF). **Annotation:** The lecture course covers the issues of the theory of architecture, what is an architectural, historical and cultural monument, its concept. Historical overview of restoration-reconstruction of monuments, national and international legal documents and agreements. Contemporary issues and concepts of theory and practice of reconstruction-regeneration of the city and historically formed core, individual buildings and structures. The basic principles of restoration-reconstruction of an architectural monument, what restoration means, what reconstruction means, classical and photogrammetric methods of research and fixation of an architectural work are also discussed. Engineering issues of the restoration of the monument, the main factors of the destruction of the monument. The lecture course discusses scientifically based research and recommendations, the possibility of using one or another theoretical approach in the planning of a specific object, and the analysis of spatial-volumetric systems. restoration of disturbed architectural-planning nature and spatial-volumetric type.

The lecture course is intended for undergraduate students.

2022

28. **T. Chigogidze; Textiles and Accessories Architectural Design;** Georgian Technical University; 2022; ISBN 978-9941-28-892-0 (PDF).
Annotation: The textbook examines different forms of textile existence in architecture and design of external and internal spaces. Textiles are used for enclosing structures and filling the interiors of capital buildings, pre-erected movable structures, temporarily used pavilions, tents and light shelters. Soft materials are widely used in manufacturing, agriculture, advertising, festive decoration, etc.
29. **Vakhtang Pirtskhalava, George Mukhiashvili; Traditional and Innovative Architectural and Constructional Systems;** Publisher Technical University, Tbilisi 2022; ISBN 978-9941-28-929-3

Annotation: The lecture course covers architectural and constructional systems and layout schemes used in the design and construction of residential and public buildings. Special attention is given to those architectural and constructional systems used in modern multi-story and high-rise civil buildings that are rarely or not covered at all (for example, beam, shell, and combined systems) in textbooks intended for students of architecture programs in universities.

It is presented to what extent the building system determines the expressiveness of the architectural object, its stylistic and compositional features. Examples of architectural-artistic and volumetric-planning solutions of buildings implemented using these building systems are given. Large-scale spatial architectural and constructional roofing types are presented, as well as examples of layout and constructional solutions for such buildings, and the possibilities of constructing roofing spatial structures against the background of new building materials and technical progress. Illustrations and a list of references used in the lecture course are provided. This lecture course is intended for graduate students specializing in architecture.

31) L. Kapanadze; L. Lursmanashvili **"Study of technological processes using statistical methods" - lecture course (in the process of registration)**

Georgian Technical University. Tbilisi. 2022. 100 pages

Annotation: The manual presents the types of research work. Stages of conducting research work - selection and justification of the topic, relevance of the topic and justification of the economic effect of the obtained results; selection of the research issue; composition of methodology and plan for conducting the research, drawing up a program for conducting the experiment, which takes into account each stage of the research; preparation and conduct of the experiment; processing and studying the results; Formulation of conclusions.

33) L. Kapanadze; L. Lursmanashvili **"Technology of textile products" - lecture course (in the process of registration)**

Georgian Technical University. Tbilisi. 2022 184 p.

Annotation: The manual presents the modern technological schemes of processing sewing products. In particular: the types and structure of hand and machine stitches, their technological maps, the initial technological processing of clothing details, the selection of thermal-sprinkling processing modes. Clothing (man, woman, upper clothing) details and knots processing methods and treatment ways. Final connection and decoration of the main details. Peculiarities of technological processing and technological schemes of products assembly.

32) **L. Beridze, M. Gambarashvili (Gagadze); Lecture course- "Urban construction climatology";**

Annotation: Urban planning is the theory and practice of planning and development of cities and other populated places, which complexly resolve socio-economic, sanitary-hygienic, technical-construction, transport and architectural artistic tasks. Urban planning is based on the principles of rational placement of residential houses, public buildings and industrial buildings, including the arrangement of convenient transport connections and consideration of natural and climatic conditions. Nevertheless, in the practice of city planning, unfortunately, insufficient consideration of local specific natural-climatic conditions and national traditions is often observed, which is mainly explained by a non-scientific, non-complex approach to neutralizing factors that negatively affect the human body.

33) **L. Beridze, M. Gambarashvili (Gagadze); Lecture course- "Use of environmentally friendly natural building materials " .**

Annotation: The use of natural materials in buildings is necessary in order not to pollute the environment, to minimize the amount of toxins in buildings, in addition, natural materials have a positive effect on a person's mood, his emotional state. Natural building materials are usually energy efficient, which is very important in construction and architecture in general. Natural building materials used in construction are: wood, straw, soil, clay, stone, reed, slate and others.