

PROGRAM INFORMATION

Program Name and Degree Awarded

Doctorate at Architecture (Doctor of Philosophy- PhD)

Duration of Studies

The program consists of 7 courses (21 credits); a seminar as non-credit course, the doctoral comprehensive qualification examination, the thesis proposal, thesis work, and the defense of the thesis before a jury. Two years are required for the thesis after completion of the courses and the seminar. The normal time limit for completion of the program is four years.

Total Credits / ECTS

21 local credits / 240 ECTS

Language of Instruction

English

Mission and Vision

The mission of the doctorate programme in architecture is to produce original, scholarly research that advances the field by creating new knowledge, theories and innovative solutions to contemporary architectural and urban issues. The programme prepares graduates for leadership roles in academia, research and the global built environment. The programme aims to develop critical thinkers who are capable of interdisciplinary work and who can contribute to a more sustainable and culturally responsive built environment. This is achieved through a focus on diverse areas such as history, theory, technology, urbanism and digital fabrication.

The vision of the Architecture PhD programme is to cultivate innovative, interdisciplinary researchers and scholars who can generate new knowledge and theories in the domain of architecture and associated fields. These individuals are expected to contribute to the enhancement of quality of life and address global challenges through advanced research and education.

Program Objectives

The PhD programme in Architecture has been designed to encourage the generation of new knowledge and theory through original and independent research. Furthermore, the programme seeks to train experts who can contribute to scientific and societal advancements in the field. The primary objectives of the programme include the development of specialised research skills, the contribution to architectural theory and practice, the development of sustainable and technological solutions, and the fostering of interdisciplinary thinking to address complex contemporary architectural challenges and improve the built environment.

Program Learning Outcomes

1. Original research

The capacity to undertake independent and systematic original research that makes a significant contribution to the discipline of architecture is a prerequisite for this position.

2. Advanced methodologies

The development, adaptation and application of sophisticated research methods and theories to complex and open-ended problems

3. Critical synthesis

To engage in critical reflection, synthesis and evaluation of extant knowledge, with a view to contributing new understandings to the forefront of architectural knowledge.

4. Complex problem formulation

The capacity to formulate relevant scientific questions and develop methodological solutions to complex, interdisciplinary challenges related to architecture and the built environment

5. Holistic understanding

To comprehend coherence and interconnectedness between different domains of knowledge and experience.

6. Professional and ethical conduct

To demonstrate a high degree of autonomy, authoritative judgment, and ethical responsibility as an expert and scholar.

7. Effective communication

The capacity to articulate and disseminate research outcomes verbally and in written form to a diverse audience comprising academics, colleagues, and the general public with a high degree of proficiency.

Curriculum

1 st SEMESTER (FALL)					2 ND SEMESTER (SPRING)				
Course Code	Course Name	T	P	C	Course Code	Course Name	T	P	C
ARCH 617	Critical Investigation of Theory in Architecture	3	0	3	ARCH 648	Environmental consideration and design process	3	0	3
ARCH 646	Traditional Housing Buildings	3	0	3	ARCH 624	Architectural environments and space	3	0	3
ARCH 634	Advanced research techniques	3	0	3	ARCH 614	Traditional building elements and techniques	3	0	3
ARCH 609	Design philosophy	3	0	3					
Total: 21 credits									

3rd SEMESTER

CODE	COURSE NAME	T	P	C
ARCH	Seminar (Non-credit)	0	0	0
Total		0		

4th SEMESTER

CODE	COURSE NAME	T	P	C
ARCH	Doctoral Qualification Examination (Non-credit)	0	0	0
Total		0		

5th -8th SEMESTERS

CODE	COURSE NAME	T	P	C
ARCH	Thesis (Non-credit)	0	0	0
Total		0		

Laboratory and Equipment Capacity (if applicable)

Not applicable

Career Opportunities

Upon completion of a PhD in architecture, professionals may opt for conventional roles such as architectural design, urban planning, and landscape architecture. These roles encompass employment opportunities in both private sector offices and government institutions. Alternatively, specialisation in domains such as historical preservation, sustainable design, or project management is a viable option. Furthermore, they have the option to transition to academia, thereby continuing their academic advancement.

Contact Information

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COURSE CATALOGUE DESCRIPTIONS

There are no mandatory courses.

ARCH 609 Design Philosophy (3- 0) 3

The philosophy of design course examines the fundamental principles, history, and ethical implications of design, addressing topics such as the role of design in shaping society, the nature of creativity, design thinking, and critical analysis of the impact of contemporary design on social and environmental issues. The programme encompasses historical design movements, the relationship between design and philosophy, and the development of personal design frameworks through theoretical study and practical research.

ARCH 612 Advanced Structural System (3-0) 3

The objective of this course is to provide knowledge on the static of advanced structural systems. Emphasis is given especially to the structures under the effect of dynamic forces such as wind and earthquakes. The architectural forms and innovative systems used in foundation to resist dynamic forces will be taught to make students familiar with the concepts about design of structural systems. Dynamic forces-wind and earthquake. Architectural form and the dynamic forces. The limits of structural systems. Foundation rooftop mechanism designs to resist earthquake forces.

ARCH 614 Traditional Building Elements and Construction Techniques (3- 0) 3

The objective of the course is to lend students analytical vision in understanding the behaviour of structural components and identify the related problems frequently met in historic buildings. Non-destructive test techniques in the diagnosis of structural failures designed for ones other than visible problems are also introduced. Together with their problems, various types of construction techniques from different historic periods mainly in Europe and Anatolia are introduced and basic intervention methods and repair materials are discussed in the light of restoration principles. Students are asked to submit assignments and prepare a seminar presentation on topics determined at the beginning of the semester.

ARCH 615 Studies on Architectural Structures (3-0) 3

Analyze some real systems in detail. Distil common concepts that emerge from theory and that apply to many kinds of systems. Learning about architecture/structure by examining a wide variety of systems such as biological, sociological, economic at a variety of levels in addition to the technological and organizational systems. Students are encouraged to explore how structure is determined by looking at system typologies and constraints that influence or determine the structure. Network methods may be used as a choice of level of abstraction.

ARCH 616 New Perspectives on Earthen Architecture (3-0) 3

The objective of this course is to provide knowledge on properties of earthen material used in the construction of traditional architecture considering the advantageous of local materials for environmental control. The course focuses on the composite use of gypsum and adobe which aims to make earthen material more compatible for new constructions.

ARCH 617 Critical Investigation of Theory in Architecture (3- 0) 3

The course undertakes an analytical investigation into the historical and contemporary relationship between architectural design and theory, examining how ideas from culture, philosophy, and society shape the field of architectural thought and practice. The course content typically encompasses the study of seminal texts, contemporary movements, and pioneers in the field, in addition to the development of foundational skills for academic research and written communication. The course undertakes an examination of specific theoretical issues, including sustainability and the role of the architect in a changing world. It further explores the application of theoretical insights to design, and the development of critical thinking and research skills through writing and discourse.

ARCH 620 Development of Contemporary Architecture (3-0) 3

Industrial revolution, scientific progress, inventions of materials and techniques, building evolution and its influence on prevailing architectural styles, in the continent. Great Exhibitions and achievements in technology and expression. Search for new forms; rationalism, engineering tradition - reinforced and ferro-concrete, Arts and Craft Ideals and Art Nouveau movement. American development, Chicago School, Louis Sullivan, architectural system of Frank Lloyd Wright- Grammer of Prairie houses. Responses to mechanisation; Deutscher Werkbund and Futurism, De Stijl and Amsterdam School. New space conceptions, Cubism, Le Corbusier's quest for ideal form, Bauhaus movement and International style, Walter Gropius, Mies Van de Rohe, Philip Johnson etc. Deconstructivism and architecture in the age of electronic media, emerging concepts. As a futuristic vision, concluding part of the course gives an idea about present revolution in science and technology, emerging concepts of human habitat, possible changes and future possibilities in architecture. Some on- going experiments by leading architects of today are highlighted as path finder.

ARCH 621 Introduction to Architectural Research (3-0) 3

The objective of the course is to make students define, plan, execute, and complete a research project, and understand the basic principles of scientific investigation and the architectural research process. Course contents are; research issues in architecture; analysing a textbook/paper; criteria for topic selection; process of a research project; research methods (qualitative and quantitative methods); proposal development; writing and presentation techniques.

ARCH 622 Form and Geometry in Architecture (3-0) 3

Knowledge fields of architecture, knowledge representation, design process, form generation in the design process, different approaches to alternative ways of form generation process, procedures of form generation, mathematics and geometric models in form generation, form generation struggles in urban design and architectural design process in the historical context, symbol sets and mapping in design process, grids and other design tools, and procedures on design tools in form generation process, computer implementations in shape grammar and solid grammar, rule based systems, computer modelling in architecture, analysis of examples in relation to form generation procedures in historical context.

ARCH 623 Geometrical Issues in Architectural Design (3-0) 3

Geometry as ground for form and space creation. Relationship and interdependence between function and geometry of designing spaces. Geometrical transformation of forms and spaces. Conceptual approach to geometrical design of buildings and structures.

ARCH 624 Architectural Environments and Space (3-0) 3

Studies on environmental issues of architectural design. Environment and built environment. Comfort as a final goal of architectural design. Historical, physical, cultural and psychological aspects of comfort providing in both building design and built environment.

ARCH 625 Theories and Process in Architectural Design (3-0) 3

The course provides a comprehensive overview of the philosophical, historical and critical foundations of architecture, in addition to advanced research on the methodologies and processes employed in building and urban design. The content of the programme typically includes interdisciplinary studies in urbanism, housing, computational design, sustainability, and cultural contexts.

ARCH 627 Application of Tessellations in Architecture (3-0) 3

Study on tessellations' shapes, types and methods of their grouping. Applications of tessellations in different visual arts, research and selection of tessellations' types relevant to architectural design problems. Tessellated grids and building design issues. Transformation of two dimensional tessellated grids into three dimensional forms. Tessellated grids and long span structures.

ARCH 628 The Effects of Colour and Light on the Perception of Architectural Edifice (3-0) 3

Architectural design is a comprehensive process requiring the understanding and utilization of a variety of skills and resource sources. While it can be a highly individualized and idiosyncratic process the necessary interface of this process with society's circumstances and perception of the architectural edifice. The objective of this course is to understand Light-Colour-Space relation and its effect to human perception through analysis of existing architectural stock and environment.

ARCH 629 Space, Form and Sustainable Technology (3-0) 3

A research and invention, oriented seminar exploring the consequences of contemporary and future sustainability strategies on formal and tectonic architectural conditions. Ecological and cultural practices as a foundation for design are considered. The course proceeds from a theoretical research on space, form and sustainable technology and analysis how designers use space, form, technology to exhibit cultural artefacts and ideas.. Student in the process of devising and learning theories, related to the subject of study, and the conclusion from the field study which is carried out in an urban district or a village core will test their knowledge from the course.

ARCH 630 Environmental Aesthetics (3-0) 3

A critical understanding of the roles of architectural design, aesthetics, and materiality in shaping the built environment. The objective of this course is dealing with visual art, elements and principles. The course begin with analyses and criticism the theoretical concepts and viewpoints which is related to the subject of the study. Student in the process of devising, learning and understanding theories, related to the environmental aesthetics will test their knowledge from the course in field study, which will be an urban district or a village.

ARCH 631 Theory of Colour (3-0) 3

The objective of this course is to understand the different relationships of colour established in the colour wheel and to be able to use them as a design tool. Studies on theory of colour and colour relationships comprising primary, secondary, analogous and complementary colours. The role of hue, saturation, value and pigment in colour theory. Advancing (warm) colours vs. receding (cool) colours and neutral colours. The reflection of light in nature, painting, architecture and interiors.

ARCH 632 Theory of Conservation (3-0) 3

Conceptual definitions and terminologies for understanding the theory of conservation. Historical approaches towards developing the theory of conservation. Basic concepts in architectural field. Types of cultural and historic heritage; architectural buildings, archaeological sites, historic area (historic urban quarter and village core). Contemporary international regulations; accepted principles, charters and declarations. The importance of recording and documentation. Conservation and the unity of style; destruction for the sake of restoration and the anti-restoration theory. Analytical approach towards the structures and the original materials. Authenticity, changing criteria and concept of authenticity in architectural conservation; Adaptive re-use of the traditional buildings with emphasis on pre-determined revitalization approaches. Conservation, revitalization and design in historic environment (urban conservation). Encouragement of public participation.

ARCH 634 Advanced Research Techniques (3-0) 3

The course is designed to provide doctoral students with the advanced skills required to conduct academic research and to teach them to critically evaluate and apply qualitative, quantitative, and mixed-methods research designs in architecture. The content is organised around core concepts, including the research process, literature reviews, the formulation of research problems, and the development of robust research proposals and experimental studies.

ARCH 635 Architectural Heritage Recording (3-0) 3

Approaching towards protection of historic buildings. The methods of making a thorough measured and descriptive survey of a historic building. Students will test their knowledge from the course on a chosen building through various, techniques and instruments from theoretical lectures, which are given during the course. Practical exercises are carried out on the field study. The students are also encouraged to develop a practical approach for analysis a traditional dwelling in a site, which is chosen as case study and is necessary for the preparation of restitution projects.

ARCH 638 Documentation Methods for Historic Environments (3-0) 3

The objective of this course is to introduce documentation methods for historic areas to preserve (historic urban quarter and village core). Student investigate local urban configuration to determine the underlying socio-spatial mechanism. Investigation of documentation methods appropriates a chosen historic area. The students will be able to gain experience in documenting procedures for analysis architectural, natural, cultural, and socio-economic characteristics of a chosen historic area, to interpret, and evaluate; strength, weakness, opportunity and threat in order to develop practical skills in this scope . Preference for field study is historic residential environment. It can

also be the theme of a restoration project. The content and scope of the study necessitate teamwork both in site and in the studio.

ARCH 646 Traditional Housing Buildings (3-0) 3

Analyse of traditional urban house and its settlement pattern, characterization of traditional house according to their determination criteria, set out principles of conservation and preservation about traditional housing and research on different cases from Anatolia and Cyprus Cities.

ARCH 648 Environmental Consideration and Design Process (3-0) 3

This course is divided into several components enabling students to study contemporary issues affecting the development of housing within the built environment worldwide. Global environmental issues, urban and rural housing issues, housing delivery systems, rural community planning and development, energy conservation, sustainability, resilience, ecological design and the exploitation of natural sources of energy, especially solar energy, form the content of course components.

ARCH 651 Computers in Design (3-0) 3

The use of computers in various design professions is discussed. Computers programming will be further studied together with an introduction to the principles of computer graphics.

ARCH 652 Introduction to Space Syntax (3-0) 3

Space syntax defines theories and techniques concerning the relationship between space and society. The course aims to convert the intuitive approach to design towards a more objective and analytic notion. The course introduces the theoretical background, the analytical techniques and related terminology used in space syntax research. It's relation to spatial cognition, movement, way finding, planning and designing phases in terms of existing built environments and virtual based parametric environments are among areas that are to be discussed.

ARCH 653 Classical Antiquity Now and Then (3-0) 3

The course analyses the survival and revival of classical architecture from the end of the Roman Empire to nowadays. Attention is paid to the formal (stylistic) vocabulary and secondly to the cultural, theoretical and political background for the perseverance of classicism in Western architecture and beyond. The course is based on the analysis of selected examples of buildings and the reading of scholarly literature on the subject.

ARCH 690 Seminar (non-credit)

The expression of the subject, objectives and the discussions on the related theoretical issues, presentation of the consequences, the discussions of the thesis in regard to contemporary developments in architecture.

ARCH 600 Thesis (non-credit)

The thesis constitutes a comprehensive and original research study with a specific hypothesis that makes a significant contribution to architectural knowledge. It is characterised by a detailed architectural proposal or comprehensive presentation of independent research findings and conclusions. The thesis represents the pivotal element of the doctoral programme, serving as a testament to the candidate's capacity to undertake independent research, demonstrate critical

thinking, and resolve sophisticated architectural challenges through innovative research and design exploration.