FINAL INTERNATIONAL UNIVERSITY

FACULTY OF ARCHITECTURE AND FINE ARTS

ARCHITECTURE Program of Courses

Course categories: UC = University Core; FC = Faculty Core; AC = Area Core; AE = Area Elective; FE = Faculty Elective; UE = University Elective

Semester	Course Code	Course Title	Course Category	Hours			Total Credit	Pre-requisite	ECTS Credit
				Lecture	Tutorial	Lab/Prac.			
1	ARCH121	GRAPHIC COMMUNICATION-I	FC	3	0	0	3	-	4
1	ARCH123	INTRODUCTORY DESIGN STUDIO-I	FC	2	0	4	4	-	8
1	MATH125	MATHEMATICS AND GEOMETRY FOR DESIGNERS	FC	2	1	0	2	-	3
1	ARCH127	INTRODUCTION TO ART AND DESIGN	FC	3	0	0	3	-	3
1	ENGL121	ENGLISH-I	UC	3	0	0	3	-	4
1	TUOG101 / TURK131	TURKISH LANGUAGE-I / TURKISH AS A FOREIGN LANGUAGE-I	UC	2	0	0	2	-	3
1	ITEC100	INFORMATION TECHNOLOGIES	UC	2	0	2	3	-	5
		Total 7 courses	**TOTAL:**	**17**	**1**	**6**	**20**		**30**
2	ARCH122	GRAPHIC COMMUNICATION-II	FC	3	0	0	3	ARCH121	4
2	ARCH124	INTRODUCTORY DESIGN STUDIO-II	FC	2	0	4	4	ARCH123	8
2	ARCH126	ARCHITECTURAL PRESENTATION TECHNIQUES	FC	3	0	0	3	-	4
2	ARCH128	INTRODUCTION TO DESIGN AND TECHNOLOGY	FC	3	0	0	3	-	4
2	ENGL122	ENGLISH-II	UC	3	0	0	3	ENGL121	4
2	TARH101 / HIST111	ATATURK'S PRINCIPLES AND HISTORY OF TURKISH REFORMS-I	UC	2	0	0	2	-	3
2	TUOG102 / TURK132	TURKISH LANGUAGE-I / TURKISH AS A FOREIGN LANGUAGE-II	UC	2	0	0	2	TURK131	3
		Total 7 courses	**TOTAL:**	**18**	**0**	**4**	**20**		**30**
3	ARCH230	SUMMER PRACTICE-I: TECHNICAL DETAILS	AC	0	0	0	0	ARCH121, ARCH124	3
3	ARCH221	ARCHITECTURAL DESIGN STUDIO-I	AC	2	0	4	4	ARCH121, ARCH124	8
3	ARCH225	BUILDING MATERIALS AND CONSTRUCTION-I	FC	3	0	0	3	-	3
3	ARCH227	HISTORY OF ARCHITECTURE	FC	3	0	0	3	-	4
3	ARCH231	COMPUTER AIDED DESIGN	FC	2	0	1	2	-	4
3	TARH102 / HIST112	ATATURK'S PRINCIPLES AND HISTORY OF TURKISH REFORMS-II	UC	2	0	0	2	-	3
3	ARFAXX1	FACULTY ELECTIVE	FE	X	X	X	3	-	5
		Total 7 courses	**TOTAL:**	**12**	**0**	**5**	**17**		**30**
4	ARCH222	ARCHITECTURAL DESIGN STUDIO-II	AC	2	0	4	4	ARCH122, ARCH221	8
4	ARCH220	VERNACULAR ARCHITECTURE	AC	2	0	0	2	-	3
4	ARCH224	TECTONICS OF STRUCTURE SYSTEM	AC	3	0	0	3	-	5
4	ARCH226	BUILDING MATERIALS AND CONSTRUCTION-II	FC	3	0	0	3	ARCH225	3
4	ENGR215	RESEARCH METHODS FOR ENGINEERING AND ARCHITECTURE	FC	2	0	0	2	-	3
4	OHSA206	OCCUPATIONAL HEALTH AND SAFETY	FC	3	0	0	3	-	3
4	ARFAXX2	FACULTY ELECTIVE	FE	X	X	X	3	-	5
		Total 7 courses	**TOTAL:**	**15**	**0**	**4**	**20**		**30**
5	ARCH330	SUMMER PRACTICE-II: CONSTRUCTION SITE	AC	0	0	0	0	ARCH230	3
5	ARCH321	ARCHITECTURAL DESIGN STUDIO-III	AC	2	0	4	4	ARCH222	8
5	ARCH325	ENVIRONMENT CONSCIOUS BUILDING DESIGN	AC	3	0	0	3	-	3
5	ARCH323	PRINCIPLES AND APPROACHES TO CONSERVATION AND RESTORATION	FC	3	0	0	3	-	3
5	ARCH327	BUILDING MATERIALS AND CONSTRUCTION-III	FC	3	0	0	3	ARCH226	3
5	ARCHXX1	AREA ELECTIVE	AE	X	X	X	3	-	6
5	UNIEXX1	UNIVERSITY ELECTIVE	UE	X	X	X	3	-	4
		Total 7 courses	**TOTAL:**	**11**	**0**	**4**	**19**		**30**
6	ARCH322	ARCHITECTURAL DESIGN STUDIO-IV	AC	2	0	4	4	ARCH321	8
6	ARCH324	INTRODUCTION TO URBAN DESIGN	AC	3	0	0	3	-	4
6	ARCH328	ADVANCED COMPUTER APPLICATIONS	FC	2	0	1	2	ARCH231	3
6	ARCHXX2	AREA ELECTIVE	AE	X	X	X	3	-	6
6	ARFAXX3	FACULTY ELECTIVE	FE	X	X	X	3	-	5
6	UNIEXX2	UNIVERSITY ELECTIVE	UE	X	X	X	3	-	4
		Total 6 courses	**TOTAL:**	**7**	**0**	**5**	**18**		**30**
7	ARCH430	SUMMER PRACTICE-III: ARCHITECTURAL OFFICE	AC	0	0	0	0	ARCH330	3
7	ARCH421	ARCHITECTURAL DESIGN STUDIO-V	AC	2	0	4	4	ARCH322	8
7	ARCH423	PROFESSIONAL ISSUES IN ARCHITECTURE	AC	3	0	0	3	-	3
7	ARCH427	WORKING DRAWINGS	AC	2	0	1	2	-	3
7	ARFAXX4	FACULTY ELECTIVE	FE	X	X	X	3	-	5
7	UNIEXX3	UNIVERSITY ELECTIVE	UE	X	X	X	3	-	4
7	UNIEXX4	UNIVERSITY ELECTIVE	UE	X	X	X	3	-	4
		Total 7courses	**TOTAL:**	**7**	**0**	**5**	**18**		**30**
8	ARCH422	ARCHITECTURE GRADUATION PROJECT	AC	2	0	4	4	ARCH421	14
8	ARCH424	CONSTRUCTION MANAGEMENT AND ECONOMICAL ISSUES	AC	3	0	0	3	-	4
8	ARCHXX3	AREA ELECTIVE	AE	X	X	X	3	-	6
8	ARCHXX4	AREA ELECTIVE	AE	X	X	X	3	-	6
		Total 4 courses	**TOTAL:**	**5**	**0**	**4**	**13**		**30**
			GRAND TOTAL:	**92**	**1**	**37**	**145**		**240**

Area and Faculty Elective Courses

No.	Course Code	Course Title	Course Category	Hours			Total Credit	Pre-requisite	ECTS Credit
				Lecture	Tutorial	Lab/Prac.			
1	ARCH229	ART AND IDEAS IN LANDSCAPE ARCHITECTURE	AE	3	0	0	3	-	6
2	ARCH223	INTERIOR DESIGN FOR ARCHITECTS	AE	3	0	0	3	-	6
3	ARCH326	THE ARCHITECTURAL IMAGINATION	AE	3	0	0	3	-	6
4	ARCH332	TECTONIC TRANSLATIONS	AE	3	0	0	3	-	6
5	ARCH359	TECTONICS OF FORM-RESISTANT STRUCTURES	AE	3	0	0	3	-	6
6	ARCH426	EMERGING ARCHITECTURE	AE	3	0	0	3	-	6
7	ARCH425	HISTORY OF URBAN IMAGE	AE	3	0	0	3	-	6
8	ARCH429	INTRODUCTION TO SMART CITIES	AE	3	0	0	3	-	6
9	INAR223	ERGONOMICS AND UNIVERSAL DESIGN IN ARCHITECTURE	AE	3	0	0	3	-	6
10	ARFA212	READING ARCHITECTURAL TEXTS	FE	3	0	0	3	-	5
11	ARFA215	EXPERIMENTAL ARCHITECTURE LAB	FE	2	0	2	3	-	5
12	ARFA306	SENSORY ARCHITECTURE: LIGHT AND SOUND	FE	3	0	0	3	-	5
13	ARFA309	EVOLUTIONARY THINKING AND THE POTENTIALS OF ENVIRONMENT	FE	3	0	0	3	-	5
14	ARFA311	CINEMATOGRAPHIC PERCEPTION AND ARCHITECTURE	FE	3	0	0	3	-	5
15	ARFA209	ECOLOGICAL ISSUES AND BUILDING DESIGN	FE	3	0	0	3	-	5
16	ARFA354	ARCHITECTURE USING DIAGRAMS	FE	3	0	0	3	-	5
17	ARFA356	APPLICATION OF ARTIFICIAL INTELLIGENCE IN ARCHITECTURE	FE	3	0	0	3	-	5

18	ARFA413	3DS MAX FOR ARCHITECTS: MODELLING AND VISUALIZATION	FE	3	0	0	3	-	5

PROGRAM INFORMATION	
General Goal of the Program	This is a four-year full-time undergraduate professional program focused on architectural design. The architecture program aims to offer students the opportunity to pursue a career in an exciting, creative, and fast-paced industry that has had a significant impact on the world. In this program, students will learn how to bring the visions and designs to life, with successful graduates moving on to good opportunities that have the potential to improve and enhance the lives of countless people. Through the experience gained as part of this degree, students will be able to see their work transform into tangible creations that benefit the communities around them. Students will learn about architectural design and its history as well as practical, professional, and technological exercises relating to ethical architecture in the commercial world. They will have opportunities to work on design projects in a variety of three-dimensional, social and topographical environments, ranging from simple/small residences and artifacts to complex megacities and events.
Program Outputs	**1. Design Methodologies, Conceptualization, and Critical Thinking** Be competent in the methods and processes of architectural design, creative problem-solving, and critical thinking skills for developing integrated and innovative design solutions. Understand different theories and their interrelations with creative solutions in the architectural practice aiming to create human-centric and meaningful built environments.
	2. Tectonics, Detailing and Material Competence Gain a comprehensive understanding of material cultures of architecture, tectonics of built forms, building technologies, integrated systems, and construction processes in relation to architectural design.
	3. Evidence-based Approaches to Design Be capable of developing fresh insights through design-by-research, research-by-design, or practice-based design research. Conduct thorough data collection, analysis, and synthesis at different scales. Have the capacity to engage with contemporary architectural issues.
	4. Innovation and Emerging Technologies Learn and apply emerging technologies and innovative design methods to the design process, design method, and construction. Understand AI-powered design tools and their role in generative design processes. Be flexible and capable of learning new skills to adapt to the rapidly progressing world.
	5. Graphical Communication Be capable of clearly illustrating all stages of the design process through the student's natural skills and the support of digital graphic communication and emerging digital technologies.
	6. Sustainable, Environmental, and Resilient Design Be capable of integrating principles of sustainability, resiliency, and ecological responsibility to create designs that respond to current and future environmental conditions.
	7. Contextual and Urban Dimensions Be sensitive, responsive, and aware of the contextual constructs of the built environment, including urban dimensions and cultural heritage.
	8. Interdisciplinary/Transdisciplinary/Multidisciplinary Collaboration and Teamwork Train the skills needed to work as a productive member of a larger design team; develop the capacity to collaborate with professionals from related fields to deliver integrated contemporary practice solutions.
	9. Professional Practice, Ethics, and Legal Responsibilities Live architecture ethics underpinning the profession. Understand local regulatory frameworks of architectural practice. Apply universal design principles to ensure public goods in all aspects.

STATISTICS

Total

Courses	Number	Credit	ECTS
All Courses	**52**	**145**	**240**
University Core Courses	8	20	28
Faculty Core Courses	16	46	64
Area Core Courses	16	43	88
Area Elective Courses	4	12	24
Faculty/School electives	4	12	20
University Elective Courses	4	12	16
Free Elective Courses			
Course Offered By The Administrating Department			
Course Offered By Other Department			

PER SEMESTER STATISTICS

Semester

	1	2	3	4	5	6	7	8	Average
Number of Courses Per Semester	7	7	7	7	7	6	7	4	6.5
Number of Credits Per Semester	20	20	17	19	19	18	18	13	18
ECTS Credits Per Semester	30	30	30	30	30	30	30	30	30

COURSE DESCRIPTIONS

Course Descriptions – I: All Area Core and Faculty/School Core courses offered by the department of the program.

Course Code	Course Title	Credit	ECTS Credit	Course Catego.	Pre-requisite	Teaching Language
ARCH121	GRAPHIC COMMUNICATION-I	(3, 0, 0)3	4	FC	-	English
Course Content	This is an introductory course aimed at improving the ability of students to draw and envision design through learning the fundamental principles of seeing, perception, freehand drawing, orthographic and paraline drawing. The purpose of this course is to improve the visual communication skills of students using a variety of concepts and techniques that will stress; understanding the basic communication elements in the field of architecture and also learning a broad and scalable graphic language that will support students in their design courses.					
ARCH123	INTRODUCTORY DESIGN STUDIO-I	(2, 0,4)4	8	FC	-	English
Course Content	This course aims to furnish students with the creative and critical skills required in architectural design. Through a series of design exercises, students explore shapes, forms, figures, colors, textures, materials, scales, and space and in this way develop their visual vocabulary and an understanding of the value of both product and process in the design studio. (Basic principles of design, creating a visual vocabulary through 2 and 3-dimensional exercises, design elements and their characteristics, design principles, problems to enhance students' mental and manual skills, emphasis on creativity, and critical thinking.)					
MATH125	MATHEMATICS AND GEOMETRY FOR DESIGNERS	(2, 1,0)2	3	FC	-	English
Course Content	Solid understanding of geometry and mathematics is vital for accurate communication of design ideas. The main aim of this course is to explore the relationship between mathematics and geometry with architecture through the study of the size, shape, relative position of figures in space, and measurement. In this regard, quadratic functions, trigonometric identities and equations, applications of trigonometry, vectors and their applications, polar equations, solution of linear system of equations, analytic geometry; parabolas, ellipses, hyperbolas, conic sections, quadratic surfaces will be studied. Therefore, this course allows students to see the connection between mathematical concepts and the construction of a scale or full-size dwelling.					
ARCH127	INTRODUCTION TO ART AND DESIGN	(3,0, 0)3	3	FC	-	English

Course Content	This course is a comprehensive introduction to the terms and principles that are generally related to multiple design disciplines. It will be a guideline for the process of conceptualization, creation, and analysis in the design and design-related issues. This course aims to elevate the level of understanding of students in two main areas: First, understanding and observation of existing design examples and environment; second, usage of principles and regulated guidelines in the process of design as a designer. Therefore, by obtaining the presented knowledge in this course, students will be able to analyze, criticize and conceptualize while proceeding the process of design.

ARCH122	**GRAPHIC COMMUNICATION-II**	(3, 0, 0)**3**	4	FC	ARCH121	English
Course Content	This course aims to further develop skills in graphic expression. It covers advanced graphic communication techniques, developed techniques of 3-D drawing, drawing conventions in different design branches, presentation techniques in various drawing media. The complexity of most design projects and the nature of design work necessitate the use of graphic images to develop and communicate design ideas from the very early conceptual phase to the final construction stage. These "design drawings" are an integral part of the problem solving and design process. This course aims to introduce and equip students of architecture with advanced graphic communication skills that they shall exercise throughout their university education and professional life. These skills include hand-on drawing method such as an architectural convention.					
ARCH124	**INTRODUCTORY DESIGN STUDIO-II**	(2, 0, 4)**4**	8	FC	ARCH123	English
Course Content	This second-semester design studio course further develops the skills introduced in ARCH123. Compositions, compilations, arrangements and re-arrangements are explored with reference to both the human and spatial design process. Through three-dimensional physical model-making students develop an understanding of the role of surfaces, solids, and voids in making spaces. The course emphasizes the design process, three-dimensional forms, space, function, material, structure, the role of context, the human dimension, scale and the transition from abstract to concrete. Also, the students are introduced to the fundamentals of architectural design and conception. Thus, students will be developing a framework of critical thinking while they are introduced to the quality of spaces, materials and design principles to develop from conceptual ideas to formal architectural presentation.					
ARCH126	**ARCHITECTURAL PRESENTATION TECHNIQUES**	(3, 0, 0)**3**	4	FC	-	English
Course Content	This course covers basic drawing techniques of various kinds essential for architectural studies and presentations, concepts of scale, materials, and technique. It is aimed to explore the theory of design and its application in the world of architecture. It also focuses on learners' skills of creating and thinking within the architectural field, examines critical elements of design theory, sketching application, and space planning, develops skills in visualization, modeling, presentation drawings, floor plans and exterior compositions, and prepares learners to be able to discuss projects in architectural terms with appropriate professional vocabulary.					
ARCH128	**INTRODUCTION TO DESIGN AND TECHNOLOGY**	(3, 0,0)**3**	4	FC	-	English
Course Content	This course includes the history of design technology, structural logic, form, structure and material, sustainable and innovative aspects of design technology; the study of the relationship between structures and relevant basic technologies and related vocabulary. Topics include; design factors, effective loads and forces, materials and design technologies in history, structure and design technology, contemporary structures, the definition of building and building elements, sustainability, innovative thinking. The course ultimately aims to help students turn their designs into reality through creative and imaginative activity.					
ARCH230	**SUMMER PRACTICE-I: TECHNICAL DETAILS**	(0, 0, 0)**0**	3	AC	-	English
Course Content	The second-year summer practice has three stages: The first step includes training to introduce CAD technologies (AutoCAD and Sketch Up) program for the second-year students to develop skills in recent design and manufacturing software/hardware technology in Architectural, construction company or any related company (10 days). In the second stage, students should attend a workshop/summer school or work for a civil society organization of their choice (10 days) and in the third stage, students should take part in an architectural excursion (5 days).					
ARCH221	**ARCHITECTURAL DESIGN STUDIO-I**	(2, 0, 4)**4**	8		ARCH121, ARCH124	English
Course Content	This course aims to teach the student by means of a project of his/her own design that will be produced with an emphasis on the overall architectural design process including site, literature survey, functional diagrams, and program concepts and considering human and social factors with minimum structural input so as not to limit the creativity of students. The course will also teach skills for the evaluation of concepts of space and help promote systematic thinking, academic integrity and ethical issues in academia and research.					
ARCH225	**BUILDING MATERIALS AND CONSTRUCTION-I**	(3, 0, 0)**3**	3	FC	-	English
Course Content	This course is based on the tectonics of building and construction methods according to the systems approach (all types of masonry; brick, stone, timber with or without tie beams). It also serves as an introduction to basic types of skeletal structures and includes a presentation of construction types and construction methods with examples considering building elements (wall, floor, roof, stairs, partitions) and building materials (metals, cement-based, wood, natural stone, earth-based, bitumen-based, glass, polymers), and construction of possible cladding systems, to be used with these systems.					
ARCH227	**HISTORY OF ARCHITECTURE**	(3, 0, 0)**3**	4	FC	-	English
Course Content	This course will introduce students to the evolution of the history of architecture from prehistoric to the current period. It explores the cultural and historical development of art and architecture from the era of early settlements and examples of monumental architecture in Mesopotamia, Egypt, Anatolia and the Mediterranean until the Late Antique and Byzantine period. This will enable students to grasp the dynamics of architectural change as a part of other developments in the field of culture and society. It will also highlight significant events, styles, architects, buildings and other factors that would lead to an understanding of why various cultures produced the architecture of their time.					
ARCH231	**COMPUTER AIDED DESIGN**	(2, 0, 1)**2**	4	FC	-	English
Course Content	This course is an introduction to using Computer-Aided Design to design residential and commercial buildings. Although this course is mainly a software tutorial, yet students are going to learn how to integrate their design ideas, after the formation of their design, with practical skills in drawing. For that matter, this course is being taught to the students by involving them with virtual drawings and also to develop their understanding of the importance of scale, proportions and level of accuracy in architectural drawing. Students will receive software tutorials during the class and while receiving the initial lessons directly related to AutoCAD, the exercises will enable them to transfer their ideas from paper to a digital format.					
ARCH222	**ARCHITECTURAL DESIGN STUDIO-II**	(2, 0, 4)**4**	8	AC	ARCH122, ARCH221	English
	This course aims to teach the student using a project of his/her design that will be produced with an emphasis on the overall architectural design process including site, literature survey, functional diagrams and program concepts, and considering human and social factors with minimum structural input so as not to limit the creativity of students. The course will also teach skills for the evaluation of concepts of space and help promote systematic thinking, academic integrity and ethical issues in academia and research. In addition to the concepts of body and space, which are					

Course Content	dealt with during the first semester, the issues of context, physical environment and tectonics are discussed within the context of project work of midrange complexity.					
ARCH220	**VERNACULAR ARCHITECTURE**	(2, 0, 0)**2**	3	AC	-	English
Course Content	This course covers theories and principles of vernacular architecture – influence of climate, geographical features, occurrences of disasters and social cultural setup – vernacular architecture in different regions of – vernacular style of Anatolia, Asia, India, Iran, EU, Africa, etc., evolution of form, construction materials and techniques of regional architecture. Vernacular architecture is characterized by its reliance on needs, construction materials and traditions specific to its particular locality. It is a type of architecture which is indigenous to a specific time and place and not replicated from elsewhere.					
ARCH224	**TECTONICS OF STRUCTURE SYSTEM**	(3, 0, 0)**3**	5	AC	-	English
Course Content	The course explores structural phenomena and their potential for architectural design. It will be based on a revised reading of tectonics as large scale phenomena related to the geometric logic of the inner force flow and the exploration of building structures as means of architectural expression in “Flexural” and “Resistant” Structure systems. Theoretical issues will be investigated through studies of contemporary architecture and the role of building structures in the design. Structural behavior, form, methods of construction, tectonics and their inter-relationships are also considered. An in-depth understanding of the relationship between structural form and behavior is the main aim of this course.					
ARCH226	**BUILDING MATERIALS AND CONSTRUCTION-II**	(3, 0, 0)**3**	3	FC	-	English
Course Content	This course provides students with the knowledge and skills required for wide-span roof structures (folded plate, space frame, membranes, dome, truss systems etc.) in macroscale and staircases, windows, doors with their detailing in micro-scale. All kinds of possible construction methods with special finishing details will be examined. The integration of building elements through practices such as external wall systems, window and door systems, floor systems (ground, intermediate and exposed soffit floors, suspended ceilings, raised floors), vertical circulation systems (ramps and stairs), roof systems (flat and sloped roofs) and partition systems (fixed and moveable partitions), will also be discussed.					
ARCH321	**ARCHITECTURAL DESIGN STUDIO-III**	(2, 0, 4)**4**	8	AC	ARCH222	English
Course Content	Architectural design is studied as an urban context intervention with consideration of a number of different urban problems. In this course, students will develop a project for a public building in an urban context, and an understanding of designing buildings and their environments and/or forming spatial patterns considering the urban environmental context of multi-story buildings or other building complexes such as hospitals, dormitories, retail or sports complexes, and mixed-use buildings. It also covers structuring the necessary orders by researching properties of the given (virtual and/or natural) topography and the architectural context, researching to find appropriate construction systems and materials considering new and advanced technologies of high or medium-rise buildings, vertical circulation, accessibility, climate, building physics, urban identity and skyline problems.					
ARCH323	**PRINCIPLES AND APPROACHES OF CONSERVATION AND RESTORATION**	(3, 0, 0)**3**	3	FC	-	English
Course Content	The course offers students awareness of different approaches to conservation and restoration of cultural heritage over time, and how these have led to the modern theory of conservation and the international conservation doctrine. It covers presentation of appropriate concepts of basic conservation, historic preservation and restoration to help students acquire skills to apply in practice, gives emphasis on creating awareness and stir up interest in architectural and urban heritage, supply an overview of the concept of architectural and urban conservation, search answers for questions: what should be preserved, why, for whom, and how. The topics include cultural heritage, measured drawing techniques; concepts of conservation, preservation, revitalization, restoration and restoration techniques.					
ARCH325	**ENVIRONMENT CONCIEOUS BUILDING DESIGN**	(3, 0, 0)**3**	3	AC	-	English
Course Content	This course focuses primarily on climate and climate elements as environmental variables that affect architectural design. The course covers basic climate and climate-responsive building design regions, building material thermal characteristics, bio-climate chart review, environmentally friendly building, materials, ventilation, HVAC systems, and sanitary facilities. Lowering the energy consumption of buildings is an important step towards a sustainable economy. This can be done by providing you with an overview of possible interventions and by reviewing several case studies, as well as lessons for other climates, on zero energy buildings. Therefore, you will discover which steps are most appropriate for individual buildings under local weather conditions.					
ARCH327	**BUILDING MATERIALS AND CONSTRUCTION-III**	(3, 0, 0)**3**	3	FC	ARCH226	English
Course Content	This course includes such topics as industrialized and prefabricated building techniques (Tunnel formwork, skeleton, panel, and modular construction systems), building envelopes (structural, nonstructural facades, classification of facades according to the materials) and their construction characteristics. Construction methods for these structures and examples of these types of buildings are examined in detail. The course mainly addresses advanced construction techniques and advanced structural systems. Problems associated with industrialized building techniques and advanced structural systems will also be surveyed. Special emphasis will be given to structural systems of architectural design; tunnel formwork, skeleton, panel and modular construction systems; facades of glass, multilayer glass, metal, concrete, brick, natural stone and system detailing.					
ARCH330	**SUMMER PRACTICE-II: CONSTRUCTION SITE**	(0, 0, 0)**0**	3	AC	ARCH230	English
Course Content	The third year summer practice aims to introduce building technologies to the students as well as acquire skills in recent design software/hardware technology in the site. In this summer practice the students will be working at a construction site for at least 14 days in order to acquire experience in construction procedures and recent construction management applications. Then the students should attend a workshop/summer school or work for civil society organization of their choice (5 days) and in the third stage, students should take part in an architectural excursion (5 days).					
ARCH322	**ARCHITECTURAL DESIGN STUDIO-IV**	(2, 0, 4)**4**	8	AC	ARCH321	English
Course Content	This course is designed to provide students with the ability to design highly complex buildings in terms of functionality, structure and construction when reacting to urban environments with specific sociocultural, economic and historical parameters. Students are required to develop the capacity to incorporate numerous architectural structures during the design process. The students will improve their understanding of the expression of architecture and structural qualities. When establishing their personal identities as independent designers, they will create alternative design solutions. Studio participants are expected to participate in discussions about the role of architects’ in-space production and to develop a point of view.					
ARCH324	**INTRODUCTION TO URBAN DESIGN**	(3, 0, 0)**3**	4	AC	-	English
Course Content	An introductory course on the basic understanding of urban design issues, in general and within a historic perspective. The course aims to introduce the theories and methods of urban design as a discipline integrated with architecture. The topics of the lectures and discussions: concept of urban space, visual variables determining the quality of urban space, unity as the basic element of urban design, permeability, variety and legibility as main principles of urban design determining the quality of public realm. The course provides students with an introductory yet comprehensive overview of urban design theory and the work of leading urban design theorists encompassing its visual, perceptual and environmental dimensions.					

ARCH328	ADVANCED COMPUTER APPLICATION	(2, 0, 1)2	3	FC	ARCH321	English
Course Content	Advanced Computer Application has become an essential tool for architecture students (and other students interested in design) while in university and for professional work. This course aims to develop 3D presentation models. 3D modeling refers to the process of creating a mathematical representation of a 3-dimensional object or shape. Motion pictures, video games, architecture, construction, product development, medical, all these industries are using 3D models for visualizing, simulating and rendering graphic designs. Rendering involves the appropriate use of materials, lights, background and animations.					
ARCH421	ARCHITECTURAL DESIGN STUDIO-V	(2, 0, 4)4	8	AC	ARCH322	English
Course Content	A studio course designed to provide the student with skills of designing long-span structures by considering integrated construction and service systems. The main emphasis is to design buildings with high complexity in function with appropriate structural systems and creating rich architectonic qualities. Therefore, the class focus is on the strategies and techniques of integration, in particular, building systems and responding to changes in environmental conditions with various materials and fabrication technologies. The students will improve their understanding of the expression of architecture and structural qualities. When establishing their personal identities as independent designers, they will create alternative design solutions.					
ARCH423	PROFESSIONAL ISSUES IN ARCHITECTURE	(3, 0, 0)3	3	AC	-	English
Course Content	The course explores professional practice and management issues and guides the students through the process of taking an architectural commission from initial meetings with the client through to completion of the project. It takes an international perspective by discussing practices in different disciplines, but uses as its guide the RIBA Plan of Work and provides a local perspective in addition. Students are introduced to the RIBA work stages, and this is supplemented by discussions of real projects carried out by the instructors. In addition to work stages, it focuses on ethical standards in architecture by following the International Union of Architect's Recommended Guidelines for the UIA Accord on Recommended International Standards of Professionalism in Architectural Practice Policy on Ethics and Conduct.					
ARCH427	WORKING DRAWINGS	(2, 0, 1)2	3	AC	-	English
Course Content	The purpose of this course is to provide students with the ability to produce detailed working drawings (two-dimensional) with the aid of a computer. In this course, students will be familiarized with working drawing systems for professional use and to the systematics of drawing a project that could be realized in the real world and interpreted by those who would need to be able to read it. In this course, the students will learn the architectural drawings, structural drawings, civil drawings, mechanical drawings, electrical drawings, and so on.					
ARCH430	SUMMER PRACTICE- III: ARCHITECTURAL OFFICE	(0, 0, 0)0	3	AC	ARCH330	English
Course Content	The fourth year summer practice provides a platform for students to acquire skills in recent design software/hardware technology. Students work in an architectural office and contribute to different projects to experience design development processes, client relations, and official works during the assigned period as well as continue working in the site in order to learn and follow all the process of finishing part of the project. Since this will be the last summer practice for the students, so, it's expected from the student to provide good portfolio during the internship. The duration of their internship is 20 working days.					
ARCH422	ARCHITECTURE GRADUATION PROJECT	(2, 0, 4)4	14	AC	ARCH421	English
Course Content	This studio course makes students utilize various skills for organizing complex architectural functions. In doing so, students are asked to develop their proposals based on site analysis, case-studies from their all pervious design courses, as well as various design exercises addressing specific components such as structural systems, materials and light utilization. In this final studio course, students are expected to develop their designs independently. They are expected to work from macro to micro scales and with special emphasis on the individual interest areas. Each student is to demonstrate individually a performance that he/she has attained the professional standard required to practice within the rich context of the architectural discipline.					
ARCH424	CONSTRUCTION MANAGEMENT AND ECONOMICAL ISSUES	(3, 0, 0)3	4	AC	-	English
Course Content	During this course, managerial and economic decisions at different levels (sector, firm, project, operational) of the building production process are introduced. Design and construction firm's relations and organizational patterns will also be examined. The most important parts of the course relate to the evaluation of building investments, feasibility studies, project delivery systems, organizational structures and cost management or cost estimation. Time and resource management estimation, planning and control, site management and planning are also surveyed. Risk management and risk planning and control are also discussed, along with the role of architects in different stages of the production process and within the context of construction laws and regulations.					

Course Descriptions – II: All Area Core and Faculty/School Core courses offered by other academic units.

Course Code	Course Title	Credit	ECTS Credit	Course Catego.	Pre-requisite	Teaching Language
ENGR215	RESEARCH METHODS FOR ENGINEERING AND ARCHITECTURE	(2, 0, 0)2	3	FC	-	English
Course Content	The key qualitative and quantitative research approaches and their applications to architecture, urban design and planning, and interior architecture are explored in this course. The method and practice of scientific study in the social sciences are primarily discussed. The course provides students with vital tools to conduct ethical and independent research. It teaches how research questions can be created, conceptual and analytical structures created, critical literature reviews made, fields entered and researched, and a research report published. Topics cover general principles and methods of study for the theoretical analysis process; social behavioral and remarkable studies on architecture, urban design and interior design; effective methods lead to the development of design concepts and preparation of qualitative and quantitative aspects of research.					
OHSA206	OCCUPATIONAL HEALTH AND SAFETY	(3, 0, 0)3	3	FC	-	English
Course Content	This course is designed to introduce the engineering student with the basic principles of occupational safety and health management in the industry. It covers basic safety terminology and how to access safety information and resources, development of safety and health function, concepts of hazard avoidance, the impact of regulations, toxic substances, environmental control, noise, explosive materials, fire protection, personal protection, first aid and risk management. Therefore, the main aim of the course is to introduce concepts of occupational safety and health, including regulatory agencies, financial and human impact of occupational injuries and illnesses, and also workers' compensation.					

Course Descriptions – III: All Area Elective and Faculty/School Elective courses offered by the department of the program.

Course Code	Course Title	Credit	ECTS Credit	Course Catego.	Pre-requisite	Teaching Language
ARCH229	ART AND IDEAS IN LANDSCAPE ARCHITECTURE	(3, 0, 0)3	6	AE	-	English
Course	This course aims to introduce the profession of landscape ARCHITECTURE, a profession defined as an art and science of planning or designing on the land, arranging and creating spaces and objects in a landscape for human use. In this course, students will also learn about the elements, or principles, of visual design include Contrast, Balance, Emphasis, Movement, White Space, Proportion,					

Course Content	Hierarchy, Repetition, Rhythm, Pattern, Unity, and Variety. These principles of design work together to create something that is aesthetically pleasing and optimizes the user experience.					
ARCH223	**INTERIOR DESIGN FOR ARCHITECTS**	(3, 0, 0)3	6	AE	-	English
Course Content	This course is the introduction to the basics of interior design to create basic understanding how interior design deals with. The details about the form, scale, proportion, light color, texture, materials and furniture's will be investigated. Perception of space will be important according to factors of style, aesthetics, safety and re-use will be dealt with this course. Interior designers make interior spaces functional, safe, and beautiful for almost every type of building. They also make the indoor spaces functional, safe, and beautiful by determining space requirements and selecting essential and decorative items, such as colors, lighting, and materials. Interior ARCHITECTURE focuses on the functionality of a space.					
ARCH326	**THE ARCHITECTURAL IMAGINATION**	(3, 0, 0)3	6	AE	-	English
Course Content	The concept of space and its components define the architectural space use. The traditional and contemporary approaches make space work. Space organizations and spatial changes define architectural space. Knowing different building typologies and basic principles of design are fundamental sources of architectural imagination. Space analysis and techniques, classification of spaces and building types are alphabets of the architectural space. Space analysis based on form and morphology is helping to understand space. The exploration and experience of analysis techniques referred to different scales of spaces with experimental learning. This course aims to lend students analytical vision in understanding the behaviour of structural components and formative ideas of buildings that is in physical environments. Non-destructive analysis techniques are also introduced.					
ARCH332	**TECTONIC TRANSLATIONS**	(3, 0, 0)3	6	AE	-	English
Course Content	The course "Tectonic Translations" investigates the theoretical and practical dimensions of tectonic approaches in architectural design. Students will explore affirmative strategies that respect and amplify established technical norms, contradictory methods that create tension between constraints and creativity, and contravening techniques that challenge conventions through innovation. These approaches address how architects respond to or challenge the interplay between materiality, technical requirements, and contextual meaning in architectural design. By integrating these approaches into their design processes, students will develop the ability to craft meaningful, technically sound, and contextually responsive architectural solutions.					
ARCH359	**TECTONICS OF FORM-RESISTANT STRUCTURES**	(3, 0, 0)3	6	AE	-	English
Course Content	This elective immerses students in the dynamic world of architectural structures, with a strong focus on the advanced principles and applications of form-resistant systems. Through an in-depth exploration of various structural typologies, participants gain a profound understanding of how innovative tectonics can significantly influence and redefine architectural design. The course meticulously examines the intricate relationship between structural behavior, form, construction methods, and tectonics, placing particular emphasis on the challenges and solutions associated with form-resistant structures. Engaging case studies illuminate these concepts, covering internal forces, compression, tension, buckling, wind instability, and the impact of standards on the evolving landscape of architectural tectonics.					
ARCH426	**EMERGING ARCHITECTURE**	(3, 0, 0)3	6	AE	-	English
Course Content	Architecture is a practice that covers many fields of art and science and has a role to respond, diverts and proposes possible spatial solutions for not only human beings but every living creature in every social and physical condition. This design-based course is aiming to question possibilities and develop alternative architectural concept proposals in extraordinary situations and extreme conditions. For example, possible scenarios of life on the earth in the future, considering global warming or the next ice age, considering life on another planet, questioning various types of natural disasters and proposing emergent architectural solutions, analyzing human/animal behaviours and developing an abstract architectural proposal for the case.					
ARCH425	**HISTORY OF URBAN IMAGE**	(3, 0, 0)3	6	AE	-	English
Course Content	This course provides an overview of the development of urban image, explores how the way we think about urban areas has evolved over time, and reflects on how both continue to inform the modern profession of urban planning. The course will examine the origins and evolution of the urban world as well as human attempts to intervene and manipulate it. The perceptual characteristics of the urban environment, stressing the ways that individuals mentally organize their own sensory experience of cities are the content of the course. Increasingly, city images are not static but subject to constant revision and manipulation by a variety of media-savvy individuals and institutions.					
ARCH429	**INTRODUCTION TO SMART CITIES**	(3, 0, 0)3	6	AE	-	English
Course Content	This elective course aims to provide an international, interdisciplinary perspective on how to integrate nature and technology in order to create smart cities. Firstly, smart buildings and smart technologies will be discussed in order to understand how they make building operations more efficient, and how we can take advantage of the outside world of the building by integrating smart technologies. Secondly, how nature can be integrated in the building, how we can use natural resources in more sustainable ways, and what influence the occupant's behavior has on the functioning of the implemented technology will be discussed. Thirdly, why we have to understand the building as a part of a larger urban system will be discussed.					
INAR223	**ERGONOMICS AND UNIVERSAL DESIGN IN ARCHITECTURE**	(3, 0, 0)3	6	AE	-	English
Course Content	In this course, students will learn about the ergonomics of human factors (HFE) and its consequences for the design process. A significant element of this course is anthropometry and the use of this terminology in architecture. Students will learn about the fundamental dimensions of the body and how they can be used in architecture, as well as disability problems, universal design and human actions in space. Ergonomics is a multidisciplinary discipline which will be studied in a broad variety of subjects.					
ARFA209	**ECOLOGICAL ISSUES AND BUILDING DESIGN**	(3, 0, 0)3	5	FE	-	English
Course Content	This course is an introduction to the theory and practice of ecological approaches to architectural design. Historical and theoretical frameworks for ecological design thinking are presented with a focus on basic ecological design principles and concepts in micro and macro scale, which is going to focus on the small scale (buildings) and the larger scale (urban patterns). The course also aims to raise the environmental issues of major significance today, specifically in relation to land, water, air, and energy and material resources. The main concepts to be explored within the course: the primary reasons and arguments for the rapidly expanding ecological design movement, sustainable architecture and its various dimensions, traditional architecture, regional architecture, design with ecology, technology and so on.					
ARFA212	**READING ARCHITECTURAL TEXTS**	(3, 0, 0)3	5	FE	-	English
Course Content	The discipline of architecture is situated at the crossroads of many other disciplines. It is not only the knowledge or science of building. Architecture is strongly tied with literature, art, philosophy, psychology, mathematics and many other independent disciplines. Architectural texts can be majorly divided into two categories: first, the texts about architecture; and second, the texts related to architecture. The first group usually includes the literary work of architects, while the second group is more diverse, including the texts by architects and other literary content written within other related disciplines that relate to the architecture in some way. This course aims to introduce students to the literature that exists within or is related to the architectural discipline.					
ARFA215	**EXPERIMENTAL ARCHITECTURE LAB**	(2, 0, 2)3	5	FE	-	English
Course Content	The course is designed to create a dynamic and collaborative platform where students can engage in experimental, hands-on activities. These activities will foster innovation by exploring new materials, structural systems, and ecological approaches, pushing the boundaries of conventional design practices. By integrating creative experimentation with practical applications, students will gain a deeper understanding of the tangible aspects of architecture that are crucial for sustainable and forward-thinking solutions. The course emphasizes on the importance of direct interaction with materials, systems, and environments, ensuring that future architects are equipped to combine the strengths of software with hands-on expertise for ground-breaking innovations.					

ARFA306	**SENSORY ARCHITECTURE: LIGHT AND SOUND**	(3, 0, 0)3	5	FE	-	English
Course Content	Multi-sensory design is traditionally assumed to be designed that impacts the five senses: sight, hearing, taste, touch, and smell. The main principles of artificial lighting system design (light sources, luminaires, and control mechanism) will be introduced. Definitions and related standards on visual comfort will be analyzed. Energy efficiency and lighting energy performance of buildings will be analyzed. Architectural acoustics will be introduced. Fundamental acoustics terminology will be taught. Noise control, sound isolation, volume acoustics, sound amplification will be discussed. Different materials and new methods of using an architectural acoustics and energy efficiency will be discussed. Also, light color sound will be discussed.					
ARFA309	**EVOLUTIONARY THINKING AND THE POTENTIALS OF ENVIRONMENT**	(3, 0, 0)3	5	FE	-	English
Course Content	The main concepts of the evolutionary thinking and potentials of environment to give a basic information of evolution such as evolutionary thinking, evolution of architecture, evolution of interior design, evolution of urban, evolution of planning, evolution of structure, evolution of construction. Beside this, it goes into deeper understanding about environment and relations to human and a built environment. Analyzing the environment can give solutions to find out more sustainable life qualities either on socio economic, socio cultural and socio physical topics.					
ARFA311	**CINEMATOGRAPHIC PERCEPTION AND ARCHITECTURE**	(3, 0, 0)3	5	FE	-	English
Course Content	Cinema's holistic approach provides and unrevealed form of spatial and urban modelling of the real world, encompassing weather, comfort, aspirations, dreams, nightmares, social spatial and cultural conditions. As Patrick KIELLER mentioned 'In film, one can explore the space of past in order to better anticipate the space of future. Or according to Robert Mallet-Stevens "It is undeniable that the cinema has a marked influence on modern ARCHITECTURE; in turn, modern architecture brings its artistic side to the cinema..." Modern architecture not only serves the cinematographic set [decor], but imprints its stamp on the staging [mise-en-scene], it breaks out of its frame; architecture 'acts.'					
ARFA354	**ARCHITECTURE USING DIAGRAMS**	(3, 0, 0)3	5	FE	-	English
Course Content	The "Architecture of Diagrams" course offers an immersive exploration into the integral role of diagrams in architectural theory, design processes, and effective communication within the profession. This interdisciplinary course blends traditional and digital approaches to equip students with the skills needed to conceive, develop, and communicate architectural ideas through a diverse range of diagrams (Planimetric, Sectional, Axonometric, Programmatic, Contextual, Circulation, Structural, Scaled, Sequential, Generative, Topological, Euclidean, Pertaining to a Visual Field, Pertaining to Sensation, Diagrammatic Buildings, Parti, Relating Equipment and Effectsm, Post Facto Explications). From conceptual sketches to complex digital representations, students will delve into the theoretical foundations, practical applications, and collaborative aspects of architectural diagramming.					
ARFA356	**APPLICATION OF ARTIFICIAL INTELLIGENCE IN ARCHITECTURE**	(3, 0, 0)3	5	FE	-	English
Course Content	The course explores the intersection of AI and architecture. Starting with a theoretical foundation, it covers the evolution of artificial intelligence, highlighting its potential and risks. As a part of the theory, large language models (LLM) will be briefly introduced as well as influential AI organizations like Google DeepMind and OpenAI, and their products: Gemini, and ChatGPT. Students engage with text-to-text generators like Bard and ChatGPT V.3, explore text-to-image (Midjourney, Dall-E, ChatGPT V.4) and image-to-image prompting. In the practical segment, students study AI-aided brainstorming and concept development and undertake multiple class projects, applying AI tools to put the design process forward in different stages. Students will also learn about getting help from A.I. for presenting their works.					
ARFA413	**3DS MAX FOR ARCHITECTS: MODELLING AND VISUALIZATION**	(3, 0, 0)3	5	FE	-	English
Course Content	The course aims to first provide students with a broad introduction to 3D visualisation, rendering, Illustration, and post-production methods using 3DS MAX computer applications and various render engines. The students will learn how to use 3DS MAX to create and transform complex 3-dimensional geometries. The student would learn how to keep up with the advancement in rendering and computer-based visualization methods using CPU and GPU render engines, including V-Ray, Lumion, and Twinmotion. The course aims to extend students' capacity to express their ideas in 3-dimensional space. The students will learn how to create expressive short animations to showcase their design projects.					