

Course Code	Course title	Course description
ARCH 101	Basic Design Studio I	Understanding nature in terms of form. Exercises in 2-dimensional composition and pure geometric shapes. Study of order, balance, proportion, symmetry, movement, and harmony through composition.
ARCH1 02	Architectural Drawing I	The course introduces the student to basic drawing skills and techniques. It covers the fundamentals of architectural drawing, conventions of graphic representation, and skills of drawing plans, sections, and elevations using orthographic and axonometric projection.
MATH 103	General Calculus	<p>The course teaches basic transcendental functions and their properties. It develops students' skills in differentiation techniques and enables them to grasp its intuitive meaning. It also provides them with essential knowledge and skills in analytic geometry. The course includes definitions.</p> <p>Of derivatives, differentiation of algebraic, trigonometric, inverse trigonometric, exponential, logarithmic, hyperbolic functions, parametric and implicit differentiation. Physical applications: velocity and acceleration. Conic sections: circle, ellipse, and parabola.</p>
ARCH 111	Basic Design Studio II	Exercises in 3-dimensional forms and volumes. Composition with 3d primitives. Properties and architectural possibilities of 3d forms, mass of different forms. Free-hand drawing, sketches in projections, shading, etc. Studies in color, color in interior space, surfaces, etc.
ARCH 112	Architectural Drawing II	The course develops the students' visual perceptive skills and introduces the means of communicating simple forms graphically by transforming visual information into two-dimensional images with shade, shadows, and perspective.
ARCH 113	Computer-Aided Design I	The course introduces 2D digital drafting concepts and techniques using AUTOCAD. It delivers knowledge of the software and its application through lectures and hands-on tutorials.

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PHY 103	Physics I	This course aims to supply students with a strong background in the field of electricity, magnetism, heat, Forces, gravity, and motion, which is needed to complete their study in the field of architecture. The objectives of this course are also to better understand the relation between heat, work, and energy conservation through the thermodynamic cycle. The course is divided into three parts: the first part includes an introduction to static electricity. The second part includes heat, work, the states of the working fluid, and the first and second laws of thermodynamics. The third part includes the study of forces on the bodies with some exposure to Static.
ARCH 201	Architectural Design Studio I	The course introduces the design processes through studio projects that apply the fundamentals of architectural design development and presentation. Emphasis is on building form in relation to human scale, activities, and furniture as a means of creating space. Projects are mainly small-scale. The final presentation is manually done.
ARCH 202	History of Architecture	This course is an introduction to the development of architecture through the ages, highlighting the factors that contribute to the architecture of various cultural, social-political, technological, and environmental factors. It also explores the development of structural systems, materials, and construction methods for different building types throughout history. The course covers different eras, from Mesopotamian architecture to Renaissance architecture.
ARCH 203	Digital Communication 2	This course introduces different forms of digital representations typically used in architectural projects, such as 3d models, computer-generated images, animation, and sheet layout design. 3d modeling concepts (i.e., surface, solid, and building information modeling BIM) are introduced and implemented using appropriate software and techniques. Rendering, animation, and printing concepts complement the set of design tools necessary for the creative development of projects and communication with clients and consultants from different disciplines in architectural practice.
ARCH 204	Building Construction I	This course introduces the student to the basics of building construction. It deals with the main elements of the building, such as load-bearing and masonry walls, skeleton R.C. structures, R.C.

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		footings, R.C. columns, R.C. floors and roofs, building insulation and protection, and staircase design and construction.
MEC103	Engineering Mechanics	Introduction to mechanics: general principles. Force system: rectangular components of a force, parallelogram law. Equilibrium of a particle: springs and cables. Force system resultant: moment of a force, tranquility of a force, free body diagram. Equilibrium of a rigid body: condition of rigid body equilibrium, equation of equilibrium, two and three internal force members. Structural analysis: simple trusses, the method of the joint, zero force members, method of sections, frames, machines, friction, and moment of inertia.
ARCH 211	Architectural Design Studio II	The course introduces students to traditional architecture and increases their awareness of the essences and details of such applications. It focuses on medium-scale projects with their functional interactions. Elementary projects are carried out. The final project is presented manually.
ARCH 212	Theory of Architecture	The course explores the path of the principal architectural thoughts and events that led to the development of major architectural design theories, starting from the Industrial Revolution until the end of modernity (1850-1960 AD). The theories behind the origin of the modern movement emphasize the various interpretations of functionalism and its opposition, e.g., Art Deco and classicism. Concepts of architectural space, form, and vocabulary, as well as major town planning and urban design concepts and theories within these periods, are discussed and critically analyzed.
ARCH 213	Introduction to Environmental Control	The course studies the interaction between buildings and climate. It emphasizes the necessity of considering climatic effects when planning and designing buildings to create comfortable environments. It also discusses the development of various methods, tools, and techniques available for environmental designs.
ARCH 214	Building Materials and Components	A brief analysis of the main and secondary building materials, properties, and products used in construction, such as stone, block, concrete, metal, glass, fiber-reinforced materials, insulation material, etc.

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ARCH 301	Architectural Digital Design Studio III	The architectural design studio (III) program addresses the principles of concepts, processes, and skills pertaining to context and climate as determinants that shape the built environment. The course offers a comprehensive exploration of computer-aided software (2D and 3D models).
ARCH 302	Building Construction II	This course deals with secondary and nonstructural components of buildings, such as floor finishes (terrazzo, wood, marble, carpet, and vinyl), suspended ceilings (tiles, gypsum board), interior partitions (wood, glass, metal, gypsum board), and openings (doors and windows).
ARCH 303	Landscape and Site Planning	The course studies the fundamentals of landscape and the relation between landscape and architectural design in site planning. Students are introduced to the study of exterior spaces as they relate to and complement building designs. Typical projects are included in the courses as tutorial exercises.
ARCH 304	Structure 1	The course deals with the basic concepts of structural analysis techniques, types of structures, loads, supports, and reactions. Students learn concepts of equilibrium and stability, calculating centroids and reactions, drawing free-body diagrams, and calculating external and internal forces in beams and trusses. The course also covers calculations of sheer and bending moments.
ARCH 305	Islamic Architecture	This course examines the formation and development of the Islamic World's architecture, art, and urban traditions. It includes the influence of ideas, cultures, and religion on forming the architectural character of Muslim society. Emphasis is on studying Islamic architecture in the Arab region, Turkey, Persia, India, and the Far East of Asia, including important cities such as Cairo, Damascus, and Istanbul. The study emphasizes selected examples of religious, civic, and residential Islamic architecture in chronological order.
ARCH 311	Architectural Design Studio IV	The Architectural Design Studio IV program focuses on structural systems, construction methods, and building materials that affect and inform architectural design.

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ARCH 312	Urban Planning & Design	This course provides an introduction to urban planning and design, including general concepts, theories, problems, and the social, economic, and environmental impacts of urban planning and design.
ARCH 313	Contemporary Issues in Architecture	Discussions and independent study investigations of the latest developments and debates in contemporary architecture center on crucial issues in modern architecture and their design implications for future development. An emphasis is placed upon architectural theory and technology, with a specific focus on their relationship and relevance to the Saudi Arabian context.
ARCH 314	Structure 2	This course examines the performance characteristics of concrete and steel as construction materials. It provides general knowledge of residential and commercial construction and an understanding of the construction process. The main emphasis of the course will be on slab systems, helping students select the proper slab system for any architectural project.
ARCH 315	Technical Installations	This course introduces students to the different mechanical systems utilized in mechanical systems (elevators, HVAC, sanitation), electrical systems (lighting, acoustics, power), and safety and fire protection systems. It will help students analyze and assess how to integrate systems and services needed by end users in an economically feasible manner. It will also assist them in applying systems integration methods to realistic situations that can be translated into the design studio. Students will also study and investigate building codes.
ARCH 401	Architectural Design Studio V	Architectural Design Studio V explores and interrogates contemporary architectural design philosophies and movements, taking them as an underpinning of design creation and development. The course deals with the design problem through added-up layers of complexity and impacting forces that must be comprehensively considered in the design process.
ARCH 402	Working Drawings	This course introduces students to the fundamentals of preparing the working drawings & details for building construction & industrialization. Drawings are presented as floor plans, roof plans, site plans, elevations, sections, wall and roof sections and details, and tables of doors & windows. During this course, drawing skills are developed & office management issues are

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		discussed. These knowledge and skills are applied to a simple given project.
ARCH 403	Lighting and Acoustics	This course studies the fundamental theory for designing and providing a sustainable yet comfortable visual and audio environment in buildings. This course examines the reverberation and resonance criteria of designing room acoustics. Artificial illumination introduces design methods and load calculation for building electrical installations.
ARCH 404	Housing and Human Settlements	Examines factors affecting settlement patterns, housing layouts, house typologies, and their built form in Saudi Arabia. Exploration of the socio-cultural specificity of housing and the modern context of urban housing.
ARCH 405	Humanities in Architecture	In this course, the students will learn the human factors and environmental aspects of building design. Students will study and analyze interior space in terms of behavioral and cultural context. They should be able to build theoretical knowledge about the environment and human behavior as it is a major concern of the design and design process. Students will learn about personal and social space, comfort, proximity zones, ergonomics, and safety issues.
ARCH 411	Architectural Design Studio VI	Design Studio VI is oriented toward planning and designing an urban project within an existing or proposed urban context, emphasizing scale, masses, patterns, identity, urban expression, and integration with the existing urban fabric. Attention should be paid to the conservation or reuse of traditional and historical buildings.
ARCH 412	Contract Documents	This course deals with construction documentation as one of the architectural design phases. Students are required to prepare construction documents, BOQs, cost estimates, and construction schedules for the project.
ARCH 413	Engineering Project Management	The course introduces students to the field of project management through a number of theoretical concepts and practical applications.

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ARCH 501	Architectural Design Studio VII	This design studio introduces comprehensive projects related to real-life problems. The core interest of this course is the integration of building systems (structural, mechanical, and environmental control systems).
ARCH 502	Professional Practice I	The course presents an overview of architectural professional practice's contemporary context and complexities. It demonstrates the varied and evolving roles and responsibilities of the architect. This course covers standard practices and procedures of the architectural profession. It emphasizes the characteristics of the best practices.
ARCH 503	Graduation Project Research and Programming	This course concentrates on program preparation for the graduation project. Each student must choose their project, collect data, and define their design problem by studying its functional and spatial requirements.
ARCH 511	Final Architectural Design Project VIII	In this course, each student must select and develop a project that expresses their abilities and technical, artistic, and professional skills. The project should highlight the cumulative knowledge base and a mature understanding of obligation to the client and society. Emphasis is on systematically appreciating all factors innate to any architectural solution and its creative articulation.
ARCH 512	Professional Practice II	The course presents an overview of architectural professional practice in the kingdom, concentrating on the Laws and Regulations that affect it. It prepares students for the Fundamentals of Architecture (FA) exam.