

Course Description					
Course Code	Course Name	No. of Hours		Prerequisites	Course Description
		Credit Hours	Contact Hours		
ARC 201	History of Architecture One	3	3	DES112, DES113	This course is an introduction to the chronological development of architecture from prehistory to Egyptian, Mesopotamian, Greek, Romans, Byzantine eras, highlighting the development of structural systems, materials; Emphasis is on the Middle- and Near-east. Indian, Chinese and Japanese civilizations is also covered. The focus contribute to the development of the unique architecture of the various cultures.
ARC202	Building construction I	3	4	DES101	The aim of this course is to study, theoretically and practically, the principles of building construction and the uses of different building materials. Students will be presented with Steps of preparing the implementation drawings, Types of foundation, Masonry construction " using different building materials such as: brick, stone, etc." Also students will be provided opportunities to develop an awareness of the main structure

					systems and all elements of walls. Students will study, practically, and how to form the brick bonding and compare between its types.
ARC213	HISTORY OF ARCHITECTURE TWO	3	3	ARC201	This course is the second of a required three-semester sequence that examines the history of Western and Non-Western architecture from its earliest beginnings to the present day. Focuses on The Middle Ages Architecture, starting with the early Christian architecture, The Romanesque. The Gothic, Renaissance, Baroque Architecture with reference to German, France and Italy give some analyses This semester deals with the history and development of art, architecture and the built environment in the West from the 15th century to the end of the 19th century, Neoclassicism and 19th century revivals, and concluding with the movements leading to the rise of modernism.
ARC 214	SURVEYING	2	2	ARC 216 and Des 111	he course is intended to cover the basic principles of plane surveying and its importance in terms of engineering. The course introduces student to the principle of tape surveying, leveling, angle measurements and determination of counter lines, areas and volumes. This course is important

					in locating and describing property boundaries and in preparation of maps associated with engineering projects.
ARC 215	Theory of structure	2	2	ARC 216 and Des 111	The course covers the basic concepts of structures that are modified for architects. It describes forces and type of loads and the balance approach of equilibrium. In addition, utilizes mathematical computation for reactions and moments.
ARC 216	Statics	3	4	PHY 101	This course addresses the following topics: Application of the fundamental principles of Newtonian mechanics to the statics of particles and the equilibrium of trusses, frames, beams and other rigid bodies. Forces; moments; trusses; beams; free body diagrams; friction; equilibrium; first and second moments of lines, areas, and volumes; centers of pressure, mass, and gravity; and moments of inertia.
ARC301	Intermediate Design Studio I	4	4	ARC 202 (co-requisite) ARC 211 (passed)	Develop the visual communication and Fundamental design skills of student through different types of assignments, even performing examples using precedents.
ARC 303	Building Construction II	3	2	ARC 202	This course introduces the basic various building

					materials, components, methods, and sequences. It explains construction technology through key functional and performance requirements for the main elements common to all buildings. Building on the knowledge and skills acquired in the course ARC 202, preliminary building design is developed to include detailed materials, and construction information.
ARC 304	Landscape and Site Planning	3	3	ARC 211	This course is an introduction to basic principles of landscape architectural design and techniques. Projects at the scale of site design, such as open spaces and building surrounds, are dealt with. This reinforces understanding of the optimum and correct use of land development, local plant materials and irrigation systems.
ARC 305	Materials and Construction Systems	2	2	ARC 215 And ARC 211	This course examines the design and construction of a building which is based on adequate knowledge of building materials and construction systems, which systems include foundation, superstructure, enclosure (walls and roofs), interior finishes, partitions, ceilings, and mechanical and electrical systems. The course

					also looks at construction and detailing of site-built and prefabricated systems, in addition to selection methods and criteria for appropriate design as a function of climate and energy use, labor and material availability, maintenance and replacement patterns, safety, functionality and cultural context
ARC 312	Architecture of Arabian Region	3	4	ARC 302 & ARC 213	This course sustains the spatial principles of traditional Arabian architecture in creative contemporary designs of cultural values. The chronology of Arabian architecture illustrates the transformation of building typology in terms of function, construction system and spatial organization. The course extends to the townscape issues of the Arabian region at different levels of building resolutions.
ARC314	Sanitary and Technical Installations	3	3	ARC 303 (co-requisite) ARC 301 (registration constrains)	Teaching and learning of the sanitary and technical installations of a building, through lecture classes and weekly practice assignments. Design integrated with the elements and components of the building, both from an architectural and constructive point of view.

ARC 315	Concrete and Steel Construction	2	2	ARC 306 and ARC 301	Study of the performance characteristics of concrete and steel, as construction materials. The main emphasis of the course will be on construction applications. Provides general residential and commercial construction knowledge and an understanding of the construction process.
ARC401	Comprehensive design studio	5	10	ARC311	<p>In this course, it is raised as a reflection on the architectural heritage, not from the point of view of rehabilitation, but from how contemporary architecture can dialogue with the heritage environment, understood as unique element, cultural sites, cultural landscapes and archaeological heritage.</p> <p>The course addresses concepts, processes and skills pertaining to context, structure and climate as determinants, which shape the Heritage, built environment and support the communication of intended concepts and meanings building-types, which exhibit complexity and challenge. Documenting heritage building, analyze building components, structural, solutions and construction systems, lighting study, along with space and landscape planning. Architectural programming is introduced.</p>

ARC 402	Construction Documents I	2	2	ARC 303	The main goal of this course is the students to learn what documents are necessary to generate in order to construct a building and be able to draw them from A to Z. Students have to produce all the details and material specifications as well as they have to manage with all the equipment necessary for the proper working of the building. Students should be able to anticipate themselves for these equipment's' needs facilitating the future engineers' labour.
ARC 404	Environmental Control	2	2	ARC 303	This course configures responsive designs according to climatic conditions for human comfort at various resolutions. The principles of heat transfer determine the efficient building materials for insulation, with the thermal load of building envelope and interior spaces. The essence of designing sunshades illustrates the control of sun paths through window openings. The natural ventilation investigates the passive techniques of air movement at urban and building scales. Overview of the environmental control recommends the design principles and building form according to the various climatic conditions with ecological sustainability of green building.

ARC 406	Lighting and Acoustics	3	4	ARC 303	This course examines the reverberation and resonance criteria of designing room acoustics with the methods of sound isolation and absorption, in addition to the design of electronic sound systems. Also the building illumination introduces the design methods and load calculation with the working drawings as part of the electrical installations in building.
ARC407	Architecture Conservation	3	3	ARC401	The course describes Saudi Heritage and Architectural Conservation, Started by the diversity of Architecture heritage, The theoretical studies of Architecture heritage, trends preserve the architecture heritage, then; the course specify Saudi different environment and its reflection to traditional houses, identifying the five Saudi Characteristic Traditional Style. Studying How to document heritage buildings.
ARC 411	Comprehensive Design Studio II	5	10	ARC 401	The comprehensive design studio develops the solid and void of housing layout integrated to a public facility with human priority for accessibility, diversity and responsive environment. The design composition details the prototype of building typologies taking into consideration the relationship between public and private functions.



ARC 412	Construction Documents II	2	2	ARC 402	Students will produce full working drawings for the building structure, sanitary, electrical and HVAC systems on architectural cross-sections. The final project will be full construction documents details for the building works at various scales and specifications and material specifications.
ARC 413	Humanities in Architecture	2	3	ARC 313	The course studies the relationship between the behavioral sciences and the architectural design process, with the objective of programming the human behavior in architectural projects. The essence of personal space defines the design principles of various building types and public spaces.
ARC 414	Principles of Urban Planning	3	4	ARC 403	This course applies the principles of urban planning according to the theoretical background in chronology and the international experiences. The principle criteria of site conditions, landuse, accessibility, socioeconomic and administrative framework represent the key issues of urban planning. The contemporary planning of digital application introduces the working techniques at present, while sustaining the urban heritage at different levels of planning resolutions.

ARC 415	Soil Mechanics and Foundations	2	2	ARC 315 and ARC 401	This course offers a comprehensive presentation of topics in the field of soil mechanics and foundations. It offers a perfect balance of theory and applications for engineers and non-engineers. Topics to be covered are Geologic Overview, Soil Types and Soil Structure, Soil Composition: Terminology and Definitions, Soil Properties, Mechanical Analysis of Soil, Soil Formation and Classification Systems, Stresses in Soil Masses, and Earth Pressure and Soil Foundations
ARC 417	Project Management	2	2	ARC 401	The course is designed to introduce students to Characteristics of Construction Industry; project organizations; the design and construction process; labor, material, and equipment utilization; cost estimation; construction pricing and contracting; construction planning; cost control, monitoring accounting; and management systems construction.
ARC 501	Advanced Design Studio	5	10	ARC 411	The course aims at developing students' skills in solving architectural composite problem with different functions, taking into consideration the urban design, urban planning basics, environmental impact and pedestrian and cars roads. Studio work well includes a comprehensive set of architectural documents, articulated model,

					and architectural details representative of the building's concepts.
ARC 502	Graduation Project Research	3	5	ARC 411	The objective of this course is to do some research prior to the graduation project and propose a conceptual design to serve as a starting point for the development of this project next semester. The course is as follows: Choose the type of project that the student want to develop; Analyze case studies regarding to this type of project, analyze and propose the program, choose a site and analyze it, interpret all the information presenting a prototype of the building, and finally draw conceptual plans.
ARC 511	Graduation Project	6	12	ARC 501	Offering the student the knowledge and the skills to integrate in one comprehensive architectural project all the learning outcomes acquired during the full program in architecture.
ARC 512	Professional Practice	2	2	ARC 501	The course explains the roles of the architect approaching to the study of the ethics of the profession in general and particular, and the respective roles of the architect as a consultant and contractor and the owner and his administration engineering if available, and knead in the process of building and construction , and the rights and obligations of each party , with the

					study of legislation governing the profession through the origins of the profession, and the scope of business and the types of contract and account fees and methods of tendering and types , the obligations of implementation and supervision of the execution , with the definition and types of construction contracts and commitment to ensure that construction defects , also offers a method for practicing the profession regulations and laws regulating buildings and legislation in the Kingdom of Saudi Arabia
PHY 101	General Physics	3	4	MATH 101	This course addresses the following topics: Units and Dimensions, Density & Pressure, Displacement, Velocity, acceleration, Acceleration of Gravity, Motion in One Dimension, Kinematic Equations for Motion, Motion in a Vertical Plane, Models in Physics and, finding the motion using integration, Velocity and acceleration in 2-D, Newton's three laws of motion, Examples of Newton's laws, Torque, Angular Acceleration and the moment of inertia, Work, energy and how to use them to solve mechanical problems, Linear Momentum and collisions, Angular Momentum, Force of friction.