

Curriculum for Associate Degree in Architectural Engineering Specialization

The curriculum of associate degree in “Architectural Engineering” specialization consists of (72 credit hours) as follows:

Serial No.	Requirements	Credit Hours
First	University Requirements	12
Second	Engineering Program Requirements	17
Third	Specialization Requirements	43
Total		72



The curriculum of associate degree
in
Architectural Engineering

First: University Requirements (12 credit hours) as follows:

Course No.	Course Title	Credit Hours	Weekly Contact Hours		Prerequisite
			Theoretical	Practical	
22001101	Arabic Language	3	3	-	
22002101	English Language	3	3	-	
21901100	Islamic Culture	3	3	-	
21702101	Computer Skills	3	1	4	
Total		12	10	4	

Second: Engineering Program Requirements (17 credit hours) as follows:

Course No	Course Title	Credit Hours	Weekly Contact Hours		Prerequisite
			Theoretical	Practical	
20201111	Engineering Workshops	1	-	3	-
20204111	AutoCAD	2	-	6	-
20506111	Occupational Safety	2	2	-	-
21301111	General Mathematics	3	2	2	-
21302111	General Physics	3	2	2	-
21302112	General Physics Laboratory	1	-	3	-
21702111	Communication Skills and Technical Writing	3	2	2	22002101
20201121	Engineering Materials	2	2	-	-
Total		17	10	18	



❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

Third: Specialization Requirements (43 credit hours) as follows:

Course No.	Course Title	Credit Hours	Weekly Contact Hours		Prerequisite
			Theoretical	Practical	
20105111	Architectural Drawing 1	2	0	6	
20105112	Architectural Drawing 2	2	0	6	20105111*
20105113	Computer Aided Design	2	0	6	20105111
20105131	Free Hand Sketching	2	0	6	
20102111	Surveying 1	3	3	0	
20102112	Surveying 1 Laboratory	2	-	6	20102111*
20105141	History of Architecture	2	2	0	
20104111	Building Materials	3	3	0	
20104112	Buildings Construction	3	2	2	20104111
20105151	Buildings Legislations	1	1	0	
20105261	Architecural Workshop Drawings	2	0	6	
20109111	Quantity Surveying	3	2	3	
20105271	Pererspective and Shades	2	1	3	
20105222	Plumbing and Electrical Drawings	2	1	3	20204111
20105181	Basics of Architectural Design	2	1	3	20105112
20105281	Architectural Design	2	0	6	20105181
20105132	Modeling Workshops	2	0	6	
20105291	Training**	3	0		-
20105292	Project	3	0		-
Total		43	16		

*-Co-requisite

** Equivalent to 280 training hours



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Guiding Plan

First Year					
First Semester			Second Semester		
Course No.	Course Title	Credit Hours	Course No.	Course Title	Credit Hours
20201111	Engineering Workshops	1	21702111	Communication Skills and Technical writing	3
20506111	Occupational Safety	2	20105112	Archetctural Drawing 2	2
20204111	AutoCAD	2	20104111	Buildings Materials	3
20105111	Archetctural Drawing 1	2	20105132	Modeling Workshops	2
20105131	Free Hand Sketching	2	21901100	Islamic Culture	3
22002101	English Language	3	20102111	Surveying 1	3
21301111	General Mathematics	3	20102112	Surveying 1 Lab.	2
21702101	Computer Skills	3			
Total		18	Total	18	

Second Year					
Third Semester			Fourth Semester		
Course No.	Course Title	Credit Hours	Course No.	Course Title	Credit Hours
20105141	History of Archetecture	2	20105281	Archetectural Design	2
20105113	Computer-aided Design	2	20105271	Pererspective and Shades	2
20105181	Basics of Archetectural Design	2	20105291	Training	3
20105222	Plunbing and Electrical Drawings	2	20105292	Project	3
20201121	Engineering Materials	2	22001101	Arabic Language	3
20105151	Buildings Legistlations	1	20109111	Quantity Surveying	3
21302111	General Physics	3	20105261	Archetectural Workshop Drawings	2
20104112	Buildings Construction	3			
21302112	General Physics Lab.	1			
Total		18	Total	18	

❖ تطبق هذه الخطة الدراسية اعتباراً من بداية العام الجامعي 2009/2008

Brief Course Description

University Requirements

Course Title	Course No	Credit Hours (Theoretical /Practical)
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Arabic Language	22001101	3 (3-0)
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تتضمن هذه المادة مجموعة من المهارات اللغوية بمستوياتها وأنظمتها المختلفة: الصوتية، والصرفية، والنحوية، والبلاغية، والمعجمية، والتعبيرية، وتشتمل نماذج من النصوص المشروقة: قرآنية، وشعرية، وقصصية، من بينها نماذج من الأدب الأردني؛ يتوخى من قراءتها وتدووقها وتحليلها تحليلًا أدبيًا؛ تنمية الذوق الجمالي لدى الطلاب الدارسين.

English Language	22002101	3 (3-0)
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English 1 is a general course. It covers the syllabuses of listening, speaking, reading, writing, pronunciation and grammar, which are provided in a communicative context. The course is designed for foreign learners of the English language, who have had more than one year of English language study. The extension part would be dealt with in the class situation following the individual differences.

Islamic Culture	21901100	3 (3-0)
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1. تعريف الثقافة الإسلامية وبيان معانيها وموضوعاتها والنظم المتعلقة بها - وظائفها وأهدافها.
2. مصادر ومقومات الثقافة الإسلامية والأركان والأسس التي تقوم عليها.
3. خصائص الثقافة الإسلامية.
4. الإسلام والعلم، والعلاقة بين العلم والإيمان
5. التحديات التي تواجه الثقافة الإسلامية.
6. رد الشبهات التي تثار حول الإسلام.
7. الأخلاق الإسلامية والآداب الشرعية في إطار الثقافة الإسلامية.
8. النظم الإسلامية.

Computer Skills	21702101	3 (1-4)
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An introduction to computing and the broad field of information technology is given. Topics covered include the basic structure of digital computer system, microcomputer, operating systems, application software, data communication and networks, and the internet. Hands-on learning emphasizes Windows xp, MS-office2000, and the internet.

Engineering Program requirements

Engineering Workshops	20201111	1 (0-3)
Development of basic manual skills in Mechanical and Electrical works. Use of manual tools and measuring devices. Hand filing, welding, metal cutting and forming. Electrical wiring.		
AutoCAD	20204111	2 (0-6)
Introduction to AutoCAD, application of AutoCAD, commands, geometric entities. Geometric construction. Dimensioning, free –hand sketching, object representation, orthographic drawing and projections.		
Occupational safety	20506111	2 (2-0)
Role of technicians in economic development First aid accident prevention. Protective devices and equipment. Industrial safety standards. Nature of fire hazards. Sand fire regulations. Physiological effects of electrical shock on human body. First aid and treatment for the effects of electric shock. Rules of spare and chemicals storage and handing.		
Communication Skills and Technical Writing	21702111	3 (2-2)
The main goal of this course is to equip the students with the necessary communication skills in everyday life & work situations and improve their abilities in technical writing to meet market needs. For this course, the English language is the language of teaching & the means of communication for all classroom situations.		
Engineering Materials	20201121	2 (2-0)
Definition of engineering materials. Classification of materials and their properties. Metallic and non-metallic materials. Metals, alloys and composite materials. Conductors, insulators and semiconductors. Mechanical, Magnetic, Thermal and electrical characteristics of materials. Industrial applications of different types of materials.		
General Mathematics	21301111	3 (2-2)
Real numbers coordinate planes, lines, distance and circles. Functions: (operations and graphs on functions), limits, continuity, limits and continuity of trigonometric functions. Exponential and logarithmic functions. Differentiation (techniques of differentiation, chain rule, implicit differentiation). Application of differentiation (increase, decrease, concavity). Graphs of polynomials. Applications: Rolle's Theorem and Mean-Value Theorem, Integration (by substitution, definite integral, fundamental theorem of Calculus). Application of definite integral (area between two curves, volumes)		
General Physics	21302111	3 (2-2)
Physics and measurement, motion in one dimension, vectors, laws of motion, circular motion, energy and energy transfer, potential energy, linear momentum and collisions, electric fields, Gauss's law, electric potential, capacitance and dielectrics, current and resistance, direct current circuits, magnetic fields, sources of the magnetic field, and Faraday's law of electromagnetic induction.		
General Physics lab	21302112	1 (0-3)
In this course, the student performs thirteen experiments in mechanics and in electricity.		

Specialization Requirements

Building Construction	20104112	3 (3-0)
The Properties of materials specifications and codes . Site investigation; excavation and fills; foundations; construction of walls; beams and slabs; brickwork and masonry; plastering and painting; sound and thermal insulation; steel structures		
Building Materials	20104111	3 (3-0)
Classification of materials used in building construction, their properties and applications.		
Quantity Surveying	20109111	3 (2-3)
Conditions of Contracts, Measurement Rules, and Quantity take off and Calculations of areas and volumes, calculation quantities of all civil and architectural works orientation in tables.		
Archetectoral Drawing 1	20105111	2 (0-6)
Architectural drawing basics and principles. Plans, sections, elevations and 3-d representation. Using CAD software packages in architectural drawings.		
Archetectoral drawing 2	20105112	2 (0-6)
Advanced knowledge and practice of architectural drawing. Professional practice for CAD , advanced 2-d commands.		
Computer-aided Design	20105113	2 (0-6)
Computer as a tool of presentation. CAD, 3-d max and adobe Photoshop softwares as programs of rendering and presentation of architectural projects.		
Free Hand Sketching	20105131	2 (0-6)
Sketching existing bodies and natural objects. Shades and light. Using pencils, charcoal, and colors in sketching.		
History of Archetector	20105141	2 (2-0)
Common knowledge in master pieces of architecture through history, emphasizing on Jordanian (historical, local, and contemporary) architecture. Architecture and its relationship with related fields (landscape, Interior design, town planning...).		
Buildings Legistlations	20105151	1 (1-0)
Jordanian building regulation and legislations no. (67) for the year 1979, and it's modifications. The course gives the students information about the set of Laws and regulations, and discusses building codes with study of the professional practice codes and Legislations.		
Archetectoral workshop Drawings	20105261	2 (0-6)
This includes working details for architectural drawings, in order to expose students to practical projects, and bridge the gap between design and construction stage, depending on Jordanian building regulation and legislations.		

Perspective and Shades	20105271	2 (1-3)
Basics of perspectives. One, two, three vanishing point perspective construction. Interior perspective . Shades of point , line , plane volume and perspectives applications		
Plumbing and Electrical Drawings	20105222	2 (1-3)
Practicing on electrical and mechanical drawings and symbols, with basic theoretical knowledge.		
Basics of Archetectoral Design	20105181	2 (1-3)
Give the student some knowledge about the basics of design process by knowing the basic elements such as point , line , form , form & space, organization, circulation , proportion & scale, principles .		
Archetectoral design	20105281	2 (0-6)
Residential building design, emphasizing on space analysis, function and furniture.		
Modeling workshops	20105132	2 (0-6)
Model making using cardboard, plastic, plywood, fabrics, glass and others. Prototype and large-scale models.		
Surveying 1	20102111	3 (3-0)
Introduction to surveying measurements, Types of measurement, Liner measurement, bearings (directions and angles), leveling, theodolite and angle (horizontal, vertical) measurements, setting of horizontal angle and alignments coordinates, theory of errors.		
Surveying 1 Lab	20102112	2 (0-6)
Exercises and project covering the topics discussed in the Surveying 1 course.		
Training	20105291	3 (280 training hours)
Equivalent to 280 Hours of field training targeted to emphasize the ability of students to apply the Theories in the real word of the profession.		
Project	20105292	3
An integrated design project to practice the principles of analysis and design acquired throughout the course of the student's study.		

