

SCHOOL OF ENGINEERING AND COMPUTING

Bachelor of Architecture

Program Description

Bachelor of Architecture program is designed to prepare well-educated, critical-thinkers and problem-solvers who possess and can effectively apply highly refined aesthetic, technical knowledge, are capable of facing professional and global challenges. Focused on sustainability challenges, which are as broadly cultural as they are technical, the program graduates are prepared to become credible stewards of the built and surrounding environment. The program leads students towards the application of principles of architecture as a science to analyze physical environments, components, and processes to identify problems and propose solutions through design and innovative products. It navigates graduates to integrate into multidisciplinary teams as architects, to respect professional ethics, and through highly professional attitude contribute to the local, regional, and global sustainability and community development.

The Bachelor of Architecture is overseen by the School of Engineering and Computing and is designed to satisfy QF Emirates Level 7 requirements.

Program Mission

Bachelor of Architecture program is focused on sustainability challenges and prepares graduates that are critical-thinkers, problem-solvers and capable of facing professional and global challenges. Equipped with highly refined aesthetic and technical knowledge, capable of respecting professional ethics and work in multidisciplinary teams, graduates can easily integrate into architectural practices for built environment problem solving.

Program Educational Objectives

The Bachelor of Architecture Program at AURAK produces graduates who are armed with knowledge and skills as articulated in its student outcomes to become:

1. Industrious architects who create healthy and safe spaces of different scale (buildings, cities) that are responsive to the environment and users.
2. Practitioners who value professional ethics and architecture business as influencing the built environment and human wellness.
3. Professionals capable of continuous learning to meet the requirements of altering built environment and comply with the regional/ national laws and regulations.
4. Designers experienced in evaluating solutions as it relates to building systems design, materials, technologies against project objectives, cost and building performance.
5. Team leaders capable of making decisions within architectural projects for universal design with minimal impact on environment.
6. Active contributors to the local community and the world through an integrative design process that takes cultural values into consideration with a multidisciplinary team.

Program Learning Outcomes

Graduates of the Bachelor of Architecture program will have the ability to:

1. Employ critical thinking that takes into consideration alternative perspectives by analyzing, evaluating, and synthesizing ideas and information gathered through research grounded in acquired information.

2. Implement complex two and three-dimensional graphic representation techniques using a wide variety of manual and digital media as well as oral and written forms to reflect on and convey the architectural design process to a wide range of stakeholders.
3. Demonstrate a solid base of knowledge in history and theory grounded in the intellectual understanding of social, cultural, and economic aspects and through applied research by raising clear and precise questions to clarify and express information to reach logical conclusions and evaluate options against relevant design criteria, building standards, and program requirements.
4. Utilize and integrate technical skills and professional knowledge in comprehensive application of life safety, accessibility, and sustainability issues in integrating the principles of environmental stewardship and making appropriate design decisions of varying scales and levels of complexity through a technical design process based on appropriate documentation in a manner that is client-centered, sustainable, aesthetic, cost effective, and socially responsible.
5. Develop the capability to synthesize variable components into an integrated design solution through the employment of appropriate building materials, building systems, and construction practices which are environmentally friendly and based on research and design decisions for a variety of systems and levels of complexity.
6. Show the ability to lead teams of stakeholders collaboratively within the process of understanding, developing, and applying solutions to problems in the built as well as the natural environments, utilizing knowledge and parameters of professional practice associated with ethical, legal, financial and social responsibilities.
7. Apply reasoning skills including math, physics, and logic to investigate problems related to gravity and other forces in structural systems, thermal heat gain and loss in buildings, material quantity estimates, budget management, and life-cycle cost analysis.

Degree Requirements

Students complete the Bachelor of Architecture by completing twelve (12) courses (32 credit hours) of University General Education, five (5) course (13 credits) of Faculty Requirements, three (3) course (9 credits) of Department of Architecture requirements, thirty-one (31) courses (101 credits) of Architecture Major requirements and two (2) courses (6 credits) of Architecture Major Electives. Total number of credits – 161.

The required courses are:

The University General Education Component Requirements

32 Credit Hours

Course Code	Title	Credit
MATH 113	Calculus I	3
ENGL 101	Composition (Writing Intensive)	3
UNIV 100	University First-Year Transition	1
CSCI 114	Applied Computational Thinking	3
CSCI 115	Applied Computational Tools	1
ARAB 101 or ARAB 110	Arabic Language and Culture for Non-Native Learners I OR Arabic Language and Culture for Native Arabic Speakers I	3
UNIV 200	Innovation, Entrepreneurship, and Sustainability (Writing Intensive)	3
Required Electives – The field of Art and Humanities (6 credits)		

MEST 100	Introduction to Islam in World Culture (Writing Intensive)	3
PHIL 100 or ENGL 200	Critical Thinking and Reasoning (Writing Intensive) OR Advanced Composition (Writing Intensive)	3
Electives – The field of Social and Behavioral Sciences (6 credits)		
UAES 200	Survey of United Arab Emirates Studies (Required)	3
PSYC 100	Introduction to Psychology (Or another course from the same list)	3
Required Elective – The field of natural Sciences (3 credits)		
ENVS 102	Sustainability and Human Environment Relations	3

The fifth writing intensive course for the Bachelor of Architecture is ARCH 591 Graduation Project Thesis Research.

School of Engineering and Computing Requirements

13 Credit Hours

Course Code	Title	Credit
PHYS 110	University Physics I	3
PHYS 111	University Physics I Lab.	1
MENG 323	Engineering Economy	3
ARCH 390	Internship I	3
ARCH 391	Internship II	3

Department Requirements

9 Credit Hours

Course	Title	Credit
INDS 112	Design Communication 1: Sketching and Drawing for Interiors	3
INDS 121	Interior Design Process, Human Factors and Ergonomic	3
INDS 122	Design Communication 2: Digital Media for Interiors	3

Major Compulsory Requirements

101 Credit Hours

Course	Title	Credit
ARCH 121	Basic Design 1	4
ARCH 122	Basic Design 2	4
ARCH 223	Computer Architectural Drawing	3
ARCH 221	Architectural Design Studio 1	4
ARCH 222	Architectural Design Studio 2	4
ARCH 231	Building Construction 1	3
ARCH 232	Building Construction 2	3
ARCH 241	History and Theory of Architecture 1	3
ARCH 242	History and Theory of Architecture 2	3
ARCH 321	Architectural Design Studio 3	4
ARCH 322	Architectural Design Studio 4	4
ARCH 331	Building Construction 3	3
ARCH 336	Construction Drawing	3
ARCH 341	History and Theory of Architecture 3	3
ARCH 342	History and Theory of Contemporary Architecture	3
ARCH 372	Sustainable Architecture	3

ARCH 421	Architectural Design Studio 5	4
ARCH 422	Architectural Design Studio 6	4
ARCH 454	Urban Planning	3
ARCH 457	Urban Design	3
ARCH 463	Landscape Architecture	3
ARCH 466	Building Utilities II: Illumination, Acoustics, and Electrical Building Services	3
ARCH 485	Professional Practice	3
ARCH 487	Project Management	3
ARCH 521	Architectural Design Studio 7	4
ARCH 591	Graduation Project Thesis Research (Writing Intensive)	2
ARCH 592	Graduation Project Design	5
CIEN 216	Structures for Architecture 1	3
CIEN 261	Surveying	1
CIEN 316	Structures for Architecture 2	3
MENG 468	Building Utilities: HVAC and Mechanical Building Services	3

Major Electives

6 Credit Hours

Course Code	Title	Credits
ARCH 449	Technology of the Built Environment	3
ARCH 456	Sustainable Housing	3
ARCH 459	Conservation of Historic Environment	3
ARCH 473	Environmental Control	3
INDS 351	Parametric Design	3
INDS 353	Landscape and Garden Design	3
INDS 451	Portfolio Design	3
INDS 453	Advanced BIM: Scheduling and coordination	3

Bachelor of Architecture Five-Year Sample Schedule

Year 1 Semester 1			Year 1 Semester 2		
Course No.	Description	CR	Course No.	Description	CR
ARCH 121	Basic Design 1	4	ARCH 122	Basic Design 2	4
MATH 113	Calculus I	3	INDS 121	Interior Design Process, Human Factors and Ergonomics	3
INDS 112	Design Communication 1: Sketching and Drawing for Interiors	3	INDS 122	Design Communication 2: Digital Media for Interiors	3
ENGL 101	Composition	3	PHYS 110	University Physics I	3
UNIV 100	University First-Year transition	1	PHYS 111	University Physics I Lab.	1
			CSCI 114	Applied Computational Thinking	3
			CSCI 115	Applied Computational Tools	1
Subtotal =		14	Subtotal =		18
Year 2 Semester 1			Year 2 Semester 2		
Course No.	Description	CR	Course No.	Description	CR
ARCH 221	Architectural Design Studio 1	4	ARCH 222	Architectural Design Studio 2	4
ARCH 231	Building Construction 1	3	ARCH 232	Building Construction 2	3
ARCH 241	History & Theory of Architecture 1	3	ARCH 242	History & Theory of Architecture 2	3
CIEN 216	Structures for Architecture 1	3	CIEN 261	Surveying	1
ARCH 223	Computer Architectural Drawing	3	ARAB 101 or ARAB 110	Arabic Language and Culture for Non-Native Learners I OR Arabic Language and Culture for Native Arabic Speakers I	3
			PSYC 100	Introduction to Psychology (or other from the same list)	3
Subtotal =		16	Subtotal =		17
Year 3 Semester 1			Year 3 Semester 2		
Course No.	Description	CR	Course No.	Description	CR
ARCH 321	Architectural Design Studio 3	4	ARCH 322	Architectural Design Studio 4	4
ARCH 331	Building Construction 3	3	ARCH 336	Construction Drawings	3
ARCH 341	History and Theory of Architecture 3	3	ARCH 342	History and Theory of Contemporary Architecture	3
CIEN 316	Structures for Architecture 2	3	ARCH 372	Sustainable Architecture	3
ENVS 102	Sustainability and Human-Environment Relations	3	ARCH	Technical Elective 1	3
Subtotal =		16	Subtotal =		16
Summer Semester					
Code	Course Title	Credits			
ARCH 390	Internship I	3			
Year 4 Semester 1			Year 4 Semester 2		
Course No.	Description	CR	Course No.	Description	CR
ARCH 421	Architectural Design Studio 5	4	ARCH 422	Architectural Design Studio 6	4
ARCH 463	Landscape Architecture	3	ARCH 466	Building Utilities II: Illumination, Acoustics, and Electrical Building Services	3
MENG 468	Building Utilities I: HVAC and Mechanical Building Services	3	ARCH 454	Urban Planning	3
MEST 100	Introduction to Islam in World Culture	3	UAES 200	Survey of United Arab Studies	3
ARCH 457	Urban Design	3	ENGL 200 or PHIL 100	Advanced Composition or Critical Thinking and Reasoning	3
Subtotal =		16	Subtotal =		16
Summer Semester					
Course No.	Description	CR			
ARCH 391	Internship II	3			
Year 5 Semester 1			Year 4 Semester 2		
Course No.	Description	CR	Course No.	Description	CR
ARCH 521	Architectural Design Studio 7	4	ARCH 592	Graduation Project Design	5
ARCH 591	Graduation Project Thesis Research	2	MENG 323	Engineering Economy	3
ARCH	Technical Elective 2	3	ARCH 485	Professional Practice	3
ARCH 487	Project Management	3	UNIV 200	Innovation, Entrepreneurship, & Sustainability	3
Subtotal =		12	Subtotal =		14
TOTAL CREDIT HOURS 161					