Umm Al-Qura University
COLLEGE OF ENGINEERING & ISLAMIC ARCHITECTURE
Department of Islamic Architecture

Program Learning Outcomes of the Degree PLO's

(2015/2016)

جامعة ام القرى
كلية الهندسة والعمارة الإسلامية
قسم العمارة الإسلامية

Program Learning Outcomes of the Degree PLO's

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FINAL Department of Islamic Architecture Intended Learning outcomes

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General Information

1. Institution: **Umm-AL- Qura University (UQU)**
2. College/Department: College of Engineering and Islamic Architecture
3. Dean/Department Head**: Dr. Hamza bin Ahmad Gulman**
4. Insert program and college administrative flowchart - **Head-department of Islamic Architecture** (DIA) **- Secretariat** **- Technicians** **- Workers**
5. Branches offering this program Branch 1. **Umm-AL- Qura University**

Program Identification and General Information

1. Program title and code **Islamic Architecture (Architecture) 0801**
2. Total credit hours needed for completion of the program: **165 credit Hours**
3. Award granted on completion of the program **Bachelor Degree in Islamic Architecture (Architecture)**
4. Major tracks/pathways or specializations within the program (eg. transportation or structural engineering within a civil engineering program or counseling or school psychology within a psychology program): **Architecture**
5. Language of instruction: **Language of instruction**
6. Web address: **https://uqu.edu.sa/en/isarch.dep**
7. Contact person: Head of Department Eng. Jamil Al-Salafy
8. Telephone number: Phone: 00966125270000 Ext. : 1221
9. Fax: 00966125270027

- According to the results of a conducted questionnaire defined the need of an Islamic Architecture specialization not only in Makkah but also in KSA. Therefore, the university decree on 14/3/1404 H established the Islamic Architecture programme. This Programme accepted students during the first semester of the academic year 1403/1404 H.

- This action followed by the establishment of the departments of Civil, Mechanics and Electricity in 26/8/1404 H. These Departments started to receive students in 1405-1406 H.

- On 15/8/1404 H the university established the College of Engineering and Islamic Architecture, including the four departments: Islamic Architecture, Civil, Mechanics and Electricity.

- This programme self-assessment report is prepared for the bachelor degree of Islamic Architecture (Architecture), which offered by the Department of Islamic Architecture (Major: Architecture). The Department of Islamic Architecture (DIA), College of Engineering and Islamic Architecture (CEIA) in Umm Al-Qura University (UQU), is one of the largest education

and research organization in the Kingdom of Saudi Arabia (KSA). Education in UQU is governed by the universities act (2685/23 M/8) (ME-01).

- Department of Islamic Architecture (DIA) was one of the first departments in UQU and one of its ambitious departments, which participates in developing human resources qualified to construct our nation. The department focuses on teaching the art and science of forming the constructional environment that contributes to the prosperity and welfare of human life. This takes place in compliance with Islamic sciences regarding all constructional aspects. DIA has about 1420 graduate students, according to the academic year 2014/2015 statistics. (DIA-15)

- The programme focuses on the Architecture basic knowledge education and aiming at developing the students' innovation spirit. Furthermore, it focuses on encouraging activities of academic research in the field of Islamic heritage.

- The academic year comprises two regular semesters and an optional summer session which offered as intensive courses. The academic semester is a period of no less than fifteen (15) weeks of instruction, not including the registration and final examination periods (ME-02). The department also offers some courses as intensive courses in summer session. Summer session is a period not exceeding eight (8) weeks of instruction, not including the registration and final examination periods. The weekly duration of each course in a summer session is twice its duration during the regular academic semester. Furthermore, two internship periods must be completed successfully during summer (UQU-01). Studies are full time and take place on weekdays from 8 am. The attendance of 75% of the lectures is mandatory for the student to pass the examinations.

- The standard period of this programme comprises 10 levels. It contains courses (called courses) covering 165 CH as per the KSA system (300 ECTS) altogether including the preparatory year (PY) which requiring 30 CH (60 ECTS).

- The academic year of the university starts in mid-August and ends in mid-June. The academic year is divided into three semesters. The first semester is fall, the second semester is spring, each comprising of 15 weeks, and the third summer semester (with conditions) is an intensive semester comprising of 8 weeks.

- The Degree Programme in Architecture is commenced once a year in the beginning of the academic year.

- The degree to be awarded is Bachelor of Islamic Architecture (Architecture).

Program Context

1. Reasons of establishing the program

Economical reasons;

Labor market needs

Social Reasons;

The increase in number of those who seek tertiary education reaching a percentage of 13.6% yearly

Relevance of the program to the mission and goals of the institution

The Islamic Architecture Programme is a part of the College of Engineering and Islamic Architecture in Umm Al-Qura University. Therefore, the vision and mission of the Department of Islamic Architecture matches the vision, mission and objectives of the university of providing distinguished graduates who facilitate local community contribution and keeping up all community development.

Relationship to other programs offered by the institution/college/department.

- This program does not offer courses for students in other programs.

- The program requires students to take courses taught by other departments.

- Procedure to make sure those courses in other departments meet the needs of students in this program.

  - Direct official coordination to define contents and descriptions of all courses taught by other departments to students of the Department of Islamic Architecture.
  - Reviewing the outcomes of these courses to guarantee the consistency with the courses taught by the Department of Islamic Architecture.
  - Establishing a team of members from both departments to follow up the development of the courses according to reports and questionnaires results.

Vision, Mission, and Goals and Objectives

The Vision

To make the Department of Islamic Architecture a prominent educational institution for preparing architects who have capability to revitalize the Islamic architecture identity, which enables them to compete locally, regionally and internationally in the field of architecture.

The Mission

To provide distinguished architectural education within a stimulating environment of creative thinking and scientific research, which facilitate local community contribution and achieve effective regional and international partnership.

- Major objectives of the program to help achieve the mission.

Goals and Objectives	Measurable Performance Indicators	Major Strategies
1.Establishing Islamic values and notions in the practice of architecture and urbanism for	1.The overall evaluation of students quality education skills in the department (average of students' grades using the yearly estimated scale of five points for final year	1. Improving the study plan that highly considers achieving the department's

preparing creative and qualified architects, planners and researchers who are capable of meeting the labor market needs locally, regionally and internationally	students) 2-The percentage of courses of which students are evaluated year round. 3- Percentage of separately endorsed programs that measure criteria of students' educational achievement, which conducted by internal and external examiners.	mission, vision and objectives. .
2. Prepare a generation of architects, planners and researchers: - Distinguished of professional capabilities - Act effectively in the KSA and Holy Makkah communities. - Skilled for implementing scientific research methods.	1- Percentage of students who enrolled in the program and successfully completed the first year. 2- Percentage of students who enrolled in the bachelor program and successfully completed the minimum time requirements. 3- Percentage of students who enrolled in and successfully completed the Graduate program. 4- Percentage of graduates who in 6 months. a- got a job, b- registered in graduate studies, and/or c- never looked for job or study.	- Establishing a study plan of priorities that focus on necessity of practicing profession training as follows: 1- Guiding course to practical activities and studies with students' involvement. 2- Qualifying faculty staff to achieve this mission.

Program Development

Since the founding of the Department of Islamic Architecture (architecture) at Umm Al Qura University, a number of improvement stages of its program have been launched to keep abreast the development of higher education and technology.

- At the early stage of the program, the Module System had been followed. At which, each module consists of a set of courses related to each other, in terms of theory, practice and application.

- In 1411 H, the department issued plan 11, When the university indorsed the credit hour system with a total of 165 credit hours as minimum for programs of the College of Engineering and Islamic Architecture. The courses of the plan were distributed on five years and 10 levels.

- In 1412 H, this process was followed by the development of plan 12, as a result of adapting the credit hours system for the first time.

- In 1419, the total number of credit hours was increased to 168 for the programs offered by the college, which led to developing plan 19.

- As a result of developing and computerizing the admission system of the university, the department developed plan 23 in 1423 H, with 165 credit hours.

- Between 1429 and 1430 H, a preparatory year became essential for all new university comers with three main directions: scientific, theoretical and medical.

- Accordingly, reduction of the Islamic Architecture program became inevitable. Plan 30 was issued, in which the specialized architectural courses divided on only four years and eight semesters rather than five years.

- The advantages of this change encompass initiation of new courses and elective courses, and integration of some courses and enhancement of others.

- The negative impact of this plan is the reduction of the architectural design courses from ten to eight, which implemented by squeezing three architectural design studios into two and initiating a separate course of working drawing.

FINAL Islamic Architecture Department Intended Learning outcomes
(ASIIN+UQU+ Preparatory) ILO'S

Design expertise
1. Have the ability to think creatively and to control and integrate the activities of other parties involved in the planning.
2. Have the ability to collect information, to define problems, to apply analysis, to judge critically and to formulate strategies for action.
3. Have the ability to think in three dimensions and to develop plans methodically, scientifically and artistically.
4. Have the ability to bring divergent factors in accordance to each other, to integrate knowledge and to apply skills when creating a design solution.

Knowledge and skills (knowledge and understanding)
Cultural and arts sciences
5. Can apply their knowledge of historical and cultural references in the field of international architecture.
6. Can apply their knowledge concerning the influence of visual arts to the quality of architectural design.
7. Have developed an understanding of the heritage of built environment and of topics relating monument protection.
8. Have developed an awareness of the connections between architecture and philosophy, and political trends and cultural movement of other creative disciplines.

Social and human sciences
9. Have the ability to develop programmers for construction projects and thereby to define the needs of developers, users and the public.
10. Have understanding of the social context of a construction project.

11. Have an understanding of the ergonomic and spatial requirements of the working environment.
12. Have knowledge of relevant laws, rules and standards for planning, design, construction, health, safety and the handling of built environment.
13. Have knowledge of architecture-related content of philosophy, political science and ethics.
14. Can apply their knowledge to society, clients and users.
15. Can identify and define functional requirements for different sectors of environment.

Environmental Sciences
16. Have an understanding of topics such as environmental sustainability, plans to reduce energy consumption, impact on the environment and an understanding of passive systems and their control.
17. Have an awareness of technology and technological consequences.
18. Have a sense of history and practice of landscape architecture, urban planning, regional and national planning.
19. Can apply their knowledge on natural systems and built environment.

Science and Engineering
20. Can apply their knowledge of bearing structure, materials, supply and disposal.
21. Have an understanding of the processes in technical design and the integration of bearing structure, civil engineering, industrial expansion into a functionally meaningful ensemble.
22. Have an understanding of infrastructure and of how to develop related communications, main-tenance and security systems.
23. Have an awareness of the importance of technical infrastructure for design and implementation and are alert to the planning and control of construction cost.
24. Have knowledge of physical problems and technologies associated with the function of a build-ing to create comfort and protection against influence of weather.

Design methods
25. Can apply knowledge of design theory and design methods.
26. Have an understanding of design techniques and design processes as well as knowledge in analysis and interpretation of framework.
27. Have information on the history of design and architecture criticism.

Construction Economics/ construction management
28. Can apply knowledge of professional, business, financial and legal requirements.
29. Have an appreciation on how the real estate business does work, have awareness of financial relationships, real estate investment, and alternative methods of procurement and facility management.
30. Have an awareness of the potential roles of architects in new and already familiar fields of action as well as in international context.
31. Have an understanding of market mechanisms and their effect on the development of built environment, an understanding of project management, project development and client consulting.

32. Have an understanding of professional ethics and codes of conduct relating to the exercise of profession and an understanding of legal obligations regarding the registration of an architect.
33. Can plan and coordinate the construction process.
34. Can organize processes involved in building construction and its economic management.

Skills
35. Have the ability to work in teams and communicate ideas by means of speech, text, drawings, models and statistics.
36. Have the ability to apply analogue and digital, graphical and model making skills making pro-jects to analyze and develop a construction plan and to convey this vividly.
37. Have an understanding of evaluation systems, which utilize manual and/ or electronic means for the diagnosis of built environment.
38. Students should acquire appropriate knowledge, skills and abilities in all study schemes that aim at the licensing to work as an architect.

UQU
39. Have awareness of Ethics and Islamic Behavior and its Impact on Islamic Architectural personality.

Preparatory Year
40. Demonstrate understanding of concepts & theories of mathematics & sciences appropriate to architecture.
41. Demonstrate understanding of basics of information & communication technology (ICT).
42. Demonstrate understanding of characteristics of engineering materials related to architecture.
43. Select & apply appropriate mathematical tools & computing methods for modeling & analyzing engineering problems.
44. Assess & evaluate the characteristics & performance of components, systems & processes.
45. Analyze results of numerical models & appreciate their limitations.
46. Maintain a systematic & methodic approach in dealing with new & advancing technology.
47. Select & appraise appropriate ICT tools to a variety of engineering problems.
48. Use computational tools & software packages pertaining to the discipline & develop required computer programs.
49. Integrate knowledge of mathematics, science, information technology, design, business context & engineering practice to solve engineering problems.
50. Employ computational facilities, measuring instruments, workshops & laboratories equipment to design experiments & collect, analyze & interpret results.
51. Use a wide range of analytical & technical tools, techniques & equipment, including pertinent software.
52. Apply numerical modeling methods and/or appropriate computational techniques to engineering problems.

Program Description:
Department manual is available for students or other stakeholders and a copy of the information relating to this program also attached to the program specification. This information includes

required and elective courses, credit hour requirements and department/college and institution requirements, and details of courses to be taken in each year or semester.

Table 1: Plan of Study

First Year - First Semester

Level	Code	Courses	CH	Department/ College	Prerequisites
1	4800140-4	Introduction to Mathematics 1	4	Preparatory Year, CEIA	None
1	4800170-6	English Language	6	English Language Center, Social Sciences	None
1	4800152-2	Computer Skills1	2	Computer Engineering, Computer and Information Systems	None
1	4800130-4	General Physics 1	4	Physics, Applied Sciences	None
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Second Semester

Level	Code	Courses	CH	Department/ College	Prerequisites
2	4800171-4	Technical English Language	4	English Language Center, Social Sciences	English Language
2	4800141-4	Introduction to Mathematics 2	4	Preparatory Year, CEIA	Introduction to Math. 1
2	4800153-3	Basic Computer Programing Skills	3	Computer Engineering, Computer and Information Systems	None
2	4800104-3	Learning and Study Skills	3	Preparatory Year, CEIA	None
			14		

Second Year-1st Semester

Level	Code	Courses	CH	Department/ College	Prerequisites
3	801171-5	Architectural Design 1	5	Islamic Architecture, CEIA	None
3	801115-2	History of Architecture	2	Islamic Architecture, CEIA	None
3	605101-2	The Holy Qur'aan1	2	Qera'at, Da‘wah and Usul-ud-Din	None
3	601101-2	Islamic Culture 1	2	Da`wah and Islamic Culture, Da‘wah and Usul-ud-Din	None
3	501101-2	Arabic Language	2	Arabic Language, Arabic Language	None
3	801103-2	Shadow and Perspective	2	Islamic Architecture, CEIA	None
3	801112-2	Design Processes	2	Islamic Architecture,	None

		and Methods		CEIA	
			17		

Second Semester

Level	Code	Courses	CH	Department/ College	Prerequisites
4	801172-5	Architectural Design 2	5	Islamic Architecture, CEIA	Architectural Design 1
4	801128-2	Building Construction 1	2	Islamic Architecture, CEIA	Architectural Design 1
4	605201-2	The Holy Qur'aan 2	2	Qera'at, Da‘wah and Usul-ud-Din	The Holy Qur'aan1
4	601201-2	Islamic Culture 2	2	Da`wah and Islamic Culture, Da‘wah and Usul-ud-Din	Islamic Culture 1
4	801117-2	Theories of Architecture 1	2	Islamic Architecture, CEIA	History of Architecture
4	801141-2	Computer Applications 1	2	Islamic Architecture, CEIA	Architectural Design 1
4	801116-2	Islamic Architecture	2	Islamic Architecture, CEIA	History of Architecture
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Third Year-1st Semester

Level	Code	Courses	CH	Department/ College	Prerequisites
5	801271-5	Architectural Design 3	5	Islamic Architecture, CEIA	Architectural Design 2
5	801222-2	Building Construction 2	2	Islamic Architecture, CEIA	Building Construction 1
5	605301-2	The Holy Qur'aan 3	2	Qera'at, Da‘wah and Usul-ud-Din	The Holy Qur'aan 2
5	801223-3	Building Sciences 1	2	Islamic Architecture, CEIA	Building Construction 1
5	601301-3	Islamic Culture 3	3	Da`wah and Islamic Culture, Da‘wah and Usul-ud-Din	Islamic Culture 2
5	801316-2	Theories of Architecture 2	2	Islamic Architecture, CEIA	Theories of Architecture 1
5	801244-2	Computer Applications 2	2	Islamic Architecture, CEIA	computer Applications 1
5	801216-2	Islamic Sciences for Architecture	2	Islamic Architecture, CEIA	Architectural Design 2
			20		

Second Semester

Level	Code	Courses	CH	Department/ College	Prerequisites
6	801272-5	Architectural Design 4	5	Islamic Architecture, CEIA	Architectural Design 3
6	801224-2	Building	2	Islamic Architecture,	Building

		Construction 3		CEIA	Construction 2
6	803227-2	Structure in Architecture 1	2	Civil Engineering, CEIA	None
6	801232-2	Urban Planning 1	2	Islamic Architecture, CEIA	Architectural Design 3
6	801225-2	Building Sciences 2	2	Islamic Architecture, CEIA	Building Construction 2
6	801231-2	Housing	2	Islamic Architecture, CEIA	Architectural Design 3
6	605401-2	The Holy Qur'aan 4	2	Qera'at, Da‘wah and Usul-ud-Din	The Holy Qur'aan 3
6	601401-2	Islamic Culture 4	2	Da`wah and Islamic Culture, Da‘wah and Usul-ud-Din	Islamic Culture 3
6	801256-2	Summer Training 1	2	Islamic Architecture, CEIA	Architectural Design 3
			21		

Fourth Year- 1st Semester

Level	Code	Courses	CH	Department/ College	Prerequisites
7	801371-5	Architectural Design 5	5	Islamic Architecture, CEIA	Architectural Design 4
7	801327-2	Building Construction 4	2	Islamic Architecture, CEIA	Building Construction 3
7	803327-2	Structure in Architecture 2	2	Civil Engineering, CEIA	Structure in Architecture 1
7	803312-2	Surveying	2	Civil Engineering, CEIA	Architectural Design 4
7	801326-2	Properties of Materials	2	Islamic Architecture, CEIA	Building Construction 2
7	102101-2	The Biography of Prophet Mohammad (pbuh)	2	History, Sharia‘h and Islamic Studies	None
7	801333-2	Urban Planning 2	2	Islamic Architecture, CEIA	Urban Planning 1
7	801317-2	Theories of Architecture 3	2	Islamic Architecture, CEIA	Theories of Architecture 2
			19		

Second Semester

Level	Code	Courses	CH	Department/ College	Prerequisites
8	801372-5	Architectural Design 6	5	Islamic Architecture, CEIA	Architectural Design 5
8	801361-2	Interior Space Design	2	Islamic Architecture, CEIA	Architectural Design 5
8	801357-2	Working Drawings	2	Islamic Architecture, CEIA	Building Construction 4

8	803427-2	Structure in Architecture 3	2	Civil Engineering, CEIA	Structure in Architecture 2
8	801334-2	Outdoor Space Design	2	Islamic Architecture, CEIA	Architectural Design 5
8	801335-2	Landscape Architecture	2	Islamic Architecture, CEIA	Architectural Design 5
8	801352-2	Summer Training 2	2	Islamic Architecture, CEIA	Architectural Design 5
			17		

Fifth Year- 1st Semester

Level	Code	Courses	CH	Department/ College	Prerequisites
9	801471-5	Architectural Design 7	5	Islamic Architecture, CEIA	Architectural Design 6
9	801418-2	Graduation Research Project	2	Islamic Architecture, CEIA	Architectural Design 6
9	801443-2	Islamic Sciences: Applications in Environment	2	Islamic Architecture, CEIA	Architectural Design 6
9	801454-2	Construction Management	2	Islamic Architecture, CEIA	Architectural Design 6
9	0	* Elective (1)	2	Islamic Architecture, CEIA	None
			13		

Second Semester

Level	Code	Courses	CH	Department/ College	Prerequisites
10	801472-5	Architectural Design 8	5	Islamic Architecture, CEIA	Architectural Design 7
10	801444-2	Contemporary Human Ecology	2	Islamic Architecture, CEIA	Architectural Design 7
10	801458-2	Building Economy	2	Islamic Architecture, CEIA	Architectural Design 6
10	0	* Elective (2)	2	Islamic Architecture, CEIA	None
			11		

* **Electives**

801801-2	Urban Heritage and Experience of KSA
801802-2	Modern Technologies in Construction Buildings
801803-2	Mega Structure Buildings
801804-2	Sustainability and Green Architecture

Program Learning Outcome Mapping Matrix

The courses that are required to teach the program learning outcomes are identified in the following table. The program learning outcomes are inserted according to the level of instruction, from this table below the courses and levels that are required to teach each one are indicated; using program's course numbers across the top and the following level scale. Levels: I = Introduction P = Proficient A = Advanced

Table 3: Program Learning Outcome Mapping Matrix