



جامعة أم القرى  
UMM AL-QURA UNIVERSITY

College of  
**Engineering and Architecture**

Department of  
**Architecture**

Operational Plan for  
**Scientific Research**

2025-2026



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# Operational Plan for Scientific Research

2025-2026

## Executive Summary

### Goal 3: Research and Innovation

#### Objective 1: Fostering Thematic Research Excellence.

Executive Steps/Procedures	Implementation Responsibility	KPIs	Duration
Identify key research themes aligned with national priorities and innovations.	Department's Scientific Research Committee	• List of publications that align with key themes.	Academic Year 2025-26
Encourage/invite faculties to form interdisciplinary research groups.	Department Administration, Faculty members	• Number of active research groups formed.	Academic Year 2025-26
Encourage/invite faculties to form interdisciplinary research groups.	Department Administration, Faculty members	• Number of joint publications and research projects.	Academic Year 2025-26
Organize regular research seminars, workshops, and brainstorming sessions.	Department's Scientific Research Committee	• Number of joint publications and research projects.	Academic Year 2025-26

#### Objective 2: Activating Scientific Seminars.

Executive Steps/Procedures	Implementation Responsibility	KPIs	Duration
Develop an annual schedule of seminars and lectures.	Department's Scientific Research Committee	• Number of seminars conducted per year.	Academic Year 2025-26
Encourage faculty and students to present research and projects.	Department's Scientific Research Committee, Faculty members and student club	• Attendance rate of participants.	Academic Year 2025-26
Use digital platforms to broadcast seminars for wider participation.	Department Administration	• Audience satisfaction scores.	Academic Year 2025-26
Establish partnerships with professional organizations to co-host events.	Department's Scientific Research Committee	• Number of seminars involving external collaboration.	Academic Year 2025-26



## **Section 1: SWOT Analysis of the Current Status of Scientific Research**

(Based on a faculty questionnaire conducted in 2025)

### **A. Strengths**

- The department includes highly qualified and competent faculty members from diverse academic backgrounds.
- Faculty members actively participate in university-funded research projects.

### **B. Weaknesses**

- Inability to secure sufficient funding for research activities.
- Absence of graduate programs that could contribute to research output.
- Heavy teaching loads and administrative committee responsibilities limit faculty members' engagement in scientific research.

### **C. Opportunities**

- Potential to reopen graduate programs to enhance research capacity.
- Annual announcements of university-funded research project opportunities.

### **D. Threats (Challenges)**

- Lack of specialized research laboratories within the department.
- Lack of international partnerships, limited faculty awareness of global opportunities, and absence of robust frameworks to support international academic engagement and cooperation.



## **Section 2: Strategic Context and Foundational Framework**

The Umm Al-Qura University (UQU) Architecture Department is tasked with advancing its scientific research and knowledge production capabilities to meet escalating national demands and align with the ambitious goals of Saudi Vision 2030. This strategic blueprint serves as an expert roadmap to enhance research rigor, foster interdisciplinary collaboration, and secure high-value external funding. The successful implementation of this plan is crucial not only for achieving high-quality architectural education, as recognized and accredited nationally and internationally, but also for fulfilling mandates set by the National Commission for Academic Accreditation and Assessment (NCAAA).

### **2.1 Contextual Mandate and UQU's Unique Role**

Department of Architecture, positioned in Makkah, operates within a unique operational context that demands architectural solutions tailored to mass urban mobilization, advanced infrastructure, and the conservation of significant cultural heritage sites in the Two Holy Cities region. The department is already committed to research alignment, with institutional objectives requiring that a minimum of 80% of its publications align with identified key themes and national priorities. To elevate its impact, the department must strategically incorporate proven enhancement strategies adopted by leading regional universities, focusing on the integration of design, technology, and social sciences in architectural and urban solutions.

### **2.2 Alignment with Saudi Vision 2030 and RDIA Strategy**

Vision 2030 provides the national framework, leveraging the Kingdom's strong investment capabilities and strategic geographical position to diversify the economy and empower citizens. To maximize resource utilization and national relevance, architecture and urban research activities must directly support the four primary national priorities established by the Research, Development, and Innovation Authority (RDIA): Health & Wellness, Sustainability and Essential Needs, Energy and Industrials, and Economies of the Future.



## Section 3:

### Operationalizing Goal 3:

#### Research and Innovation

##### Objective 1: **Fostering Thematic Research Excellence**

#### **3.1. Identify key research themes aligned with national priorities and innovations.**

##### (Executive Step 1)

The establishment of clearly defined, high-impact Research Focus Areas (RFAs) is necessary to cluster resources and align departmental efforts with the unique challenges of the Makkah region and the national strategic goals of Vision 2030.

#### **3.1 Defining High-Impact Research Focus Areas (RFAs)**

##### **RFA 1: Sustainable and Climate-Resilient Architectural Systems (Sustainability and Essential Needs):**

This area concentrates on addressing the urgent need for performance improvement in the Gulf Region's built environment.

##### **RFA 2: Digital Urban Governance and Smart Technologies (Economies of the Future):**

This focus area targets the integration of cutting-edge technology into the design and management lifecycle of the built environment. It includes the advanced application of Building Information Modeling (BIM), Artificial Intelligence (AI), and Digital Twin technologies. Digital Twins enable comprehensive simulation of urban systems within dynamic virtual environments, offering scalable solutions for resource optimization, environmental stewardship, and design automation. This technological adoption is central to flagship Saudi projects, such as NEOM, and is transforming urban management paradigms in line with the objectives of government bodies like the Saudi Data and Artificial Intelligence Authority (SDAIA).

##### **RFA 3: Cultural Heritage, Documentation, and Conservation (Vibrant Society / Essential Needs):**

Recognizing UQU's location and the national priority of protecting cultural heritage, this RFA emphasizes the documentation, preservation, and adaptive reuse of the rich architectural and urban legacy of Makkah and its surrounding regions. The initiative seeks to engage faculty and students in research and fieldwork dedicated to recording traditional building techniques, conserving historic urban fabrics, and integrating heritage values into contemporary design practice.



### **3.2. Encourage/invite faculty members to form interdisciplinary research groups.**

(Executive Step 2 & 3)

The aim is to strengthen research collaboration among the University's various disciplines and expand partnerships with national and international universities, fostering innovative, high-impact research outcomes.

#### **3.2.1 Internal Collaboration (Across University Majors)**

- Organize interdisciplinary workshops to showcase joint projects and promote idea exchange among faculty.
- Introduce awards for outstanding interdisciplinary research teams.

#### **3.2.2 External Collaboration (National and International Partnerships)**

- Identify potential national and international universities and research centers with aligned research interests.
- Develop a database of potential collaborators.
- Encourage faculty to co-develop proposals for joint grants or publications with external partners.
- Motivate faculty to participate in international conferences and research networks related to their fields.



**Section 4:**

Objective 2: **Activating scientific seminars.**

**4.1. Develop an annual schedule of seminars and lectures.**

(Executive Step 1)

Name	Subject	Date	Time	In-person/ Online

Filled by the Postgraduate and Scientific Research Committee

## 4.2. Encourage faculty and students to present research and projects.

(Executive Steps 2 & 3)

The aim of encouraging faculty and students to present their research and projects is to enhance the visibility and impact of the department's academic work, foster knowledge sharing, and promote collaboration within and beyond the institution. By providing opportunities for presenting research, faculty and students can receive constructive feedback, refine their work, and drive innovation. Additionally, utilizing digital platforms to broadcast seminars can enable wider participation and further extend the reach of the department's research activities.

Name	Research/Project Title	Date	Time	In-person/ Online
Students of "Principles of Urban Planning" Supervisor: Dr. Abdulla Karban	The Third Urbanism Symposium	29 Oct 2025	11 am	In-person
Students of all design studios	Architecture Final Jury	21-25 Dec 2025	10 am	In-person
Students of all urban studios	Urban Final Jury	21-25 Dec 2025	10 am	In-person

## 4.3. Establish partnerships with professional organizations to co-host events.

(Executive Step 4)

### 4.3.1 Identify Potential Sponsors

- Create a targeted list of professional organizations and industry partners aligned with the department's academic and research priorities.

### 4.3.2 Outreach and Relationship Building

- Reach out to key contacts with personalized proposals.
- Schedule meetings or presentations to discuss mutual benefits and negotiate sponsorship terms.
- Emphasize long-term partnership opportunities beyond a single event.

## Section 5:

### Consistency with UQU Strategic Plan

#### Goal 3: Research and Innovation

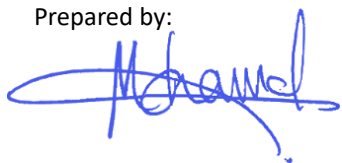
##### Objective 1: Fostering Thematic Research Excellence.

Executive Steps/Procedures	UQU Strategic Plan
	Research and Graduate Studies Track
Identify key research themes aligned with national priorities and innovations.	Linking research outcomes with national needs
Encourage/invite faculties to form interdisciplinary research groups.	Research collaboration among the University's different majors  Research collaboration with other national and international universities
Organize regular research seminars, workshops, and brainstorming sessions.	Professional development of research skills

##### Objective 2: Activating Scientific Seminars.

Executive Steps/Procedures	UQU Strategic Plan
	Research and Graduate Studies Track
Develop an annual schedule of seminars and lectures.	Enhancing the Knowledge Environment
Encourage faculty and students to present research and projects.	Enhancing the Knowledge Environment
Use digital platforms to broadcast seminars for wider participation.	Enhancing the Knowledge Environment
Establish partnerships with professional organizations to co-host events.	Enhancing the Knowledge Environment

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1st September 2025

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