Research Strategy and Operational Plan 2020-2024

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For
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Contents

1. Background

In pursuance of the mission statement and strategic goals of City University College of Ajman (CUCA), the Research Directorate (RD) intends to promote and nurture a research culture that integrates research, teaching, and community services related initiatives that are aligned with the national goals. The Research Directorate has been assigned the responsibility and mandate of advancing and enhancing frontiers of knowledge for all stakeholders of CUCA's community; with capacity building and dissemination of knowledge being the driving thrusts of the strategic direction of the Directorate. To remain integral to the UAE prosperity and the region at large, the College has established its research priorities in such a way that the final resultants of the research efforts positively impact all facets of the society's life.

With dynamism of research activities in mind, CUCA highly values and encourages collaborative research efforts. The College strives to create links with other research centers and the various sectors of industry and economy in the UAE. The College also recognizes that research in the areas of science, medicine, technology, and humanities requires allocation of financial resources and engagement of specialized expertise. Sharing research facilities, resources and costs is the best way to maximize the expected benefits of research. CUCA is also cognizant that in the realm of knowledge societies and digital era, monopolization of knowledge is almost near to impossible. The best strategy, therefore, is to create partnership and networks in order to promote research productivity and initiatives. Furthermore, the Research Directorate endeavors to provide solution- based and applied research and to work towards broadening the horizon of research through construction, dissemination, and application of research findings that is reflected in the economic and societal development.

Therefore, within the above contextual background, this research strategy intends to provide a roadmap for achieving the second strategic goal of the College (Strategic Plan of the College for the period 2018-2023, which is, "*Increase Research Output: Increase creative research and scholarly works among faculty of all programs that will have an impact on the economy and society, locally, regionally and internationally.*" Hence, the Research Strategy presented here will guide the activities of the College through the Research Directorate for the coming years. The Directorate has adopted the motto "*We are putting the gear for expansion and excellence in research*" as a conceptual frame of reference when implementing the research strategy.

The aim of this document is to formalize the structural elements of CUCA's research strategic plan for the period 2020 – 2024 and present research as an integral operational activity of the College. The document identifies the key research areas and priorities and explains how the College intends to go about implementing its strategic research goals.

2. Research Mission
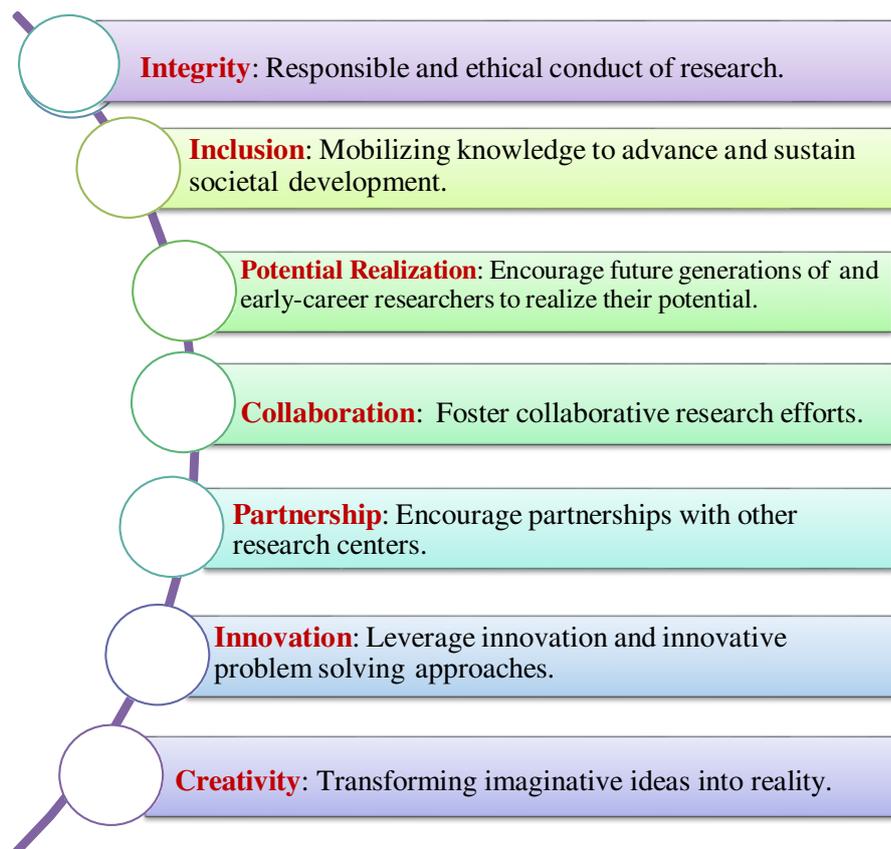
The mission of the Research mission at CUCA is:

To promote and support a research culture at CUCA where in pursuit of advancing the boundaries of knowledge aligned with the national goals, the researchers will apply principles of excellence in research, integrate research findings into teaching and learning processes, and contribute to community development.

In order to realize the research mission of CUCA, the Research Directorate presents this strategic plan to translate it into actionable tasks.

3. Research Core Values

In concert with the Values of the College, the Research at CUCA shall be guided by the core research values shown in Figure 1.

Fig. 1: Research Core Values

Integrity: Responsible and ethical conduct of research.

Inclusion: Mobilizing knowledge to advance and sustain societal development.

Potential Realization: Encourage future generations of and early-career researchers to realize their potential.

Collaboration: Foster collaborative research efforts.

Partnership: Encourage partnerships with other research centers.

Innovation: Leverage innovation and innovative problem solving approaches.

Creativity: Transforming imaginative ideas into reality.

4. Thematic Research Clusters and Associated Focus Areas

The current portfolio of CUCA's academic programs falls under the realm of the following academic domains:

- ⚑ Natural Sciences
- ⚑ Medical Sciences
- ⚑ Humanities and Arts
- ⚑ MIS and Technology
- ⚑ Social Sciences

Yet, to promote collaborative and interdisciplinary research, CUCA will adapt the five thematic research clusters shown in Figure 2. All researchers are encouraged to establish one or more of these clusters as they carry out their research to help the College to continuously evaluate its research activities and its contributions to the population at large.

Fig. 2: Thematic Research Clusters

To facilitate designing and carrying out research, each of these five thematic clusters are further broken down into focus areas. These thematic clusters and their focus areas are shown in figure 3. These thematic clusters along with the associated focus areas intend to enhance institutional responsiveness to the emerging societal needs and establish the foundation for research partnerships and community engagement. In addition, this conceptual framework will help CUCA to meaningfully implement the research strategy at the College. While the clusters are broad, the focus areas are expansive enough to allow CUCA's faculty members and students to conduct research within domains of their academic and professional expertise.

Fig. 3: Research Thematic Clusters and Associated Focus Areas

Research Theme: Cluster A	
Advancement of governance and social justice →	◇ Leadership and change management. ◇ Social justice, ethics, and sovereignty of law. ◇ Peace, tolerance, and inclusiveness.

Research Theme: Cluster B	
Innovation & Entrepreneurship →	◇ Impact of new technologies. ◇ Entrepreneurial environments. ◇ Artificial intelligence. ◇ Simulations and modeling.

Research Theme: Cluster C	
Discovery of new horizons of knowledge →	◇ Innovative solutions and breakthroughs ◇ Dissemination and analysis of technological best practices. ◇ Adaptation and testing of new technologies. ◇ Contextualization of technological research. ◇ Health informatics and theory of computation.

Research Theme: Cluster D	
Sustainability & Eco-systems →	◇ Improvement of service delivery methods. ◇ Enterprise development and public policy analysis. ◇ Macroeconomic dynamics and sustainability. ◇ Quality assurance and performance measurement.

Research Theme: Cluster E	
Cultural engagement & public health →	◇ Historical and national heritage. ◇ Art, culture, and communication. ◇ Engagement and partnership. ◇ Well-being and public health. ◇ Values and traditions of society. ◇ Socio-cultural dynamics.

5. Foundational Tasks and Related Priorities

The current efforts in implementing the research strategy at CUCA shall focus on three foundational tasks: A) developing the <u>research infrastructure</u>; including the administrative practices, policies, and physical laboratories space. B) Enhancing and building <u>research capacities</u> of the faculty members and graduate students. C) Establishing avenues for outreach and collaborative research initiatives. These foundational tasks will be accomplished within the first two years of the time span of this plan; i.e., from 2020 – 2022. It is assumed that these tasks – when completed – will lay down the foundation for a favorable, encouraging, and conducive research environment.

Each of these foundational tasks will be achieved through a set of research priorities to promote the dynamic and collaborative environment. The priorities will be actionable with a focus to establish the foundational tasks and operationalize the research efforts at CUCA. On the other hand, the effectiveness of the Research Efforts at CUCA will be measured by the research strategic goal, objectives, and KPIs, which are discussed later.

1. Infrastructure Priorities

- ❖ Establish the necessary administrative research setup.
- ❖ Provide efficient research-related administrative services.
- ❖ Develop policies and procedures for carrying out research activities.
- ❖ Create awareness among all stakeholders about the importance of research as strategic driver within CUCA.
- ❖ Enhance the current library research-related resources.
- ❖ Create a research hub that houses all research related information and resources.
- ❖ Expand the physical space of the existing research labs.

2. Research Capacities Priorities

- ❖ Attract and recruit faculty members with high research caliber.
- ❖ Conduct capacity-building training sessions for faculty and graduate students.
- ❖ Encouraging students' quality research projects through establishing research awards.
- ❖ Create research peer-mentoring teams.
- ❖ Encourage and support early-career researchers.

3. Collaboration Priorities

- ❖ Establish external collaborative research partners.
- ❖ Seek potential funding partners.
- ❖ Encourage and support inter-departmental research initiatives.

6. Research Strategic Goals

Along with the foundational tasks and priorities, in order to achieve the <u>Strategic Goal 2 of the College – Increase Research Output</u>, the Research Directorate has the approved set of actionable strategic research <u>Goals</u> and <u>Objectives</u> with measurable <u>Assessment Tools</u> and <u>Targets</u> to measure the achievement of the set <u>KPIs</u>. The Research Goals are shown in Figure 4.

<u>Fig. 4: Six Strategic Research Goals</u>
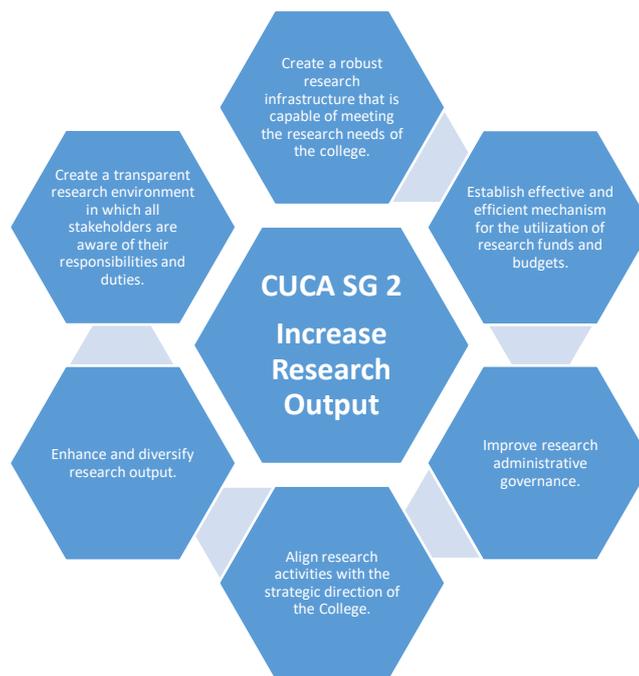
The six research strategic goals and associated Objectives are shown in Table 1. Through these goals, the Directorate concentrates on building a framework of excellence in research and leveraging research best practices. It is expected that the integration among these planning elements will lead to a more dynamic learning opportunities and enhances the impact and vital role of research on community development.

Table 1: Strategic Research Goals and Objectives

Research Strategic Goal ①	Create a robust research infrastructure that is capable of meeting the research needs of the college.
Objectives	

1. Create a database that houses all research related records and information of the college.
2. Provide laboratories with additional research equipment.
3. Provide adequate IT services and software.
4. Expand laboratory spaces.
5. Enhance the library with research-related databases, manuals and references.

Research Strategic Goal ②	Establish effective and efficient mechanism for the utilization of research funds and budgets.
Objectives	

1. Increase the amount of funds allocated for research activities within the college's budget.
2. Encourage faculty members to make use of the available research funds.
3. Establish a mechanism for fair and just distribution of the research funds among the various departments.
4. Increase opportunities and sources of external research funds.

Research Strategic Goal ③	Improve research administrative governance.
Objectives	

1. Establish a research internal review board (RIRB).
2. Develop a mechanism within the departments for planning and monitoring departmental research activities.
3. Establish a system for recognizing research output.
4. Develop an effective procedure for supervising and evaluating research activities.
5. Ensure compliance with research ethics.
6. Increase the number of research collaborative programs with other research centers and business entities to benefit from their expertise.

Research Strategic Goal ④	Align research activities with the strategic direction of the College.
Objectives	
1. Ensure – through the Research Committee – that faculty research initiatives are in line with the strategic direction of the college.	
2. Work with academic units to ensure that graduate students' research projects are defined within the strategic parameters of the college.	
3. Enable researchers to respond to emerging research opportunities that support UAE national goals.	

Research Strategic Goal ⑤	Enhance and diversify research output.
Objectives	
1. Create a scheme for recognizing the various formats of the scholarly activities.	
2. Continue to build and provide satisfactory research awards for outstanding researchers.	
3. Facilitate and coordinate new research initiatives and agenda.	

Research Strategic Goal ⑥	Create a transparent research environment in which all stakeholders are aware of their responsibilities and duties.
Objectives	
1. Provide an interface for integrating and coordinating research activities.	
2. Share and disseminate research findings and research-related information through appropriate means.	
3. Develop and disseminate research policies among all stakeholders.	

Table 2 shows the linkage among the CUCA's research strategy and Operational Research Goals and foundational tasks. As can be noted, the foundational tasks are encompassed in Research Strategic Goal 1, which will be revised as and when the research directorate is fully functional.

Table 2: Linkage Among CUCA's Strategic Goal (for Research) and Operational Research Goals, and Foundational Tasks

Strategic Goal 2: Increase research output						
CUCA Strategy	**Operational Research Goals**					
	Goal 1	**Goal 2**	**Goal 3**	**Goal 4**	**Goal 5**	**Goal 6**
	Create a robust research infrastructure that is capable of meeting the research needs of the college.	Establish effective and efficient mechanism for the utilization of research funds and budgets.	Improve research administrative governance.	Align research activities with the strategic direction of the College.	Enhance and diversify research output.	Create a transparent research environment in which all stakeholders are aware of their responsibilities and duties.
Strategy 1 Increase resources and support to enhance research growth and demonstrate recognition for inter-disciplinary research and creative works.	✓	✓	✓			
Strategy 2 Target research and development initiatives that impact economy and employability.		✓		✓		
Strategy 3 Encourage undergraduate and graduate students in developing innovative and creative projects and scholarly works.					✓	✓

9. Assessment of Strategic Goals Achievement

As is seen in the Tactical Operational Plan below, each of the Research Objectives has an assessment tool and a target. Achievement of each of the associated Goals depends on achieving these individually planned objectives. In addition, it is expected that results from each of these objectives will be analyzed and recommendations (based on the analysis) will be made to seek improvements in the future. Such <u>use of results process</u> will be used to assess the research outcomes and eventual achievement of the institutional research goals. The following <u>assessment tools with targets</u> will be used to evaluate the extent to which the research objectives and cumulatively the research goals are achieved.

1. **Assessment Tool**: Summary Report

   Target: Completion of <u>ALL (100%)</u> planned research Objectives

2. **Assessment Tool**: Number of objectives successfully completed (achieved targets)

   Target: 100%

For example, in the Operational Plans that follows, for <u>Objective 1.1 Enhance the library with research-related databases, manuals and references</u>, the Assessment Tools and associated targets are:

- Assessment Tool: Library Holding (target: 10% above last year)

- Assessment Tool: Research Satisfaction Rate (An average of 4 on a Likert Scale of 1 – 5)

Also for <u>Objective 2.1 Increase opportunities and sources of external research funds,</u> the Assessment Tool and associated target is:

- Assessment Tool: Number of External Research Opportunities (target: At least three)

The above examples clearly articulate the use of SMART objectives with a clearly defines assessment process.