

Research Strategic Plan for College of Arts and Sciences at Qatar University

“Celebrating achievements, shaping our preferred future”

An Strategic Plan Draft/Framework

I-Guiding Vision and Mission (Use existing college vision/mission)

Mission: Prepare Qataris for a better tomorrow.

Vision: Become the premiere College of Arts and Sciences and a model for scholarship of engagement in Qatar and the region

II-Strategic Plan

Introduction

Faced with an increasingly competitive landscape due to globalization and the arrival of many reputable international educational institutions, Qatar University (QU) has embarked on an ambitious reform project to enhance its competitive position. Both the current University strategic plan and Research strategic plans call for a sustained effort to boost research productivity in national and regional priorities to ensure that QU remains a leader in the nation and the region. As the largest college and gatekeeper at QU, the College of Arts and Sciences (CAS) can leverage its size and diversity to serve as a model for interdisciplinary research excellence at QU and in the region. To assume such a position of leadership, it is critical to capitalize on potential interdisciplinary synergies provided by the multiplicity of disciplines within CAS. This is because of the growing recognition among major academic institutions that competitive advantages lie in white spaces between disciplines and can be realized only through interdisciplinary collaboration/integration. The latter also enables focus and leveraging of assets (human and infrastructure) to maximize cost-effectiveness and impact.

As it embarks on interdisciplinary research strategy, CAS efforts will be guided by the three pillars of institutional competitiveness as a framework for realignment. This framework calls for a **Strategy** to chart a roadmap for research excellence, the necessary **Structure** for efficient implementation of the strategy, and a **Culture** to that embraces and sustains the strategic push for interdisciplinary research excellence. The following are guiding principles/actions under each of the three pillars:

Strategy

- Provide clear vision and goals
- Use pull strategy instead of push strategy to increase research productivity
- Promote interdisciplinary integration with focus on white space between disciplines for leveraging of resources and expertise to maximize productivity and impact,
- Secure faculty inputs, buy-in, and ownership as a foundation of strategy,
- Hire faculty with extensive research experience
- Build on strengths and competitive advantages
- Ensure close alignment with overall QU strategy
- Connect with stakeholders

Structure

- Focus on areas of competitive strength, national/regional needs, and future growth [e.g., Health: obesity/diabetes, Environment: pollution/Global warming]; Sustainable development, Social Sciences

- Establish interdisciplinary research initiatives to leverage resources and maximize synergies
- Develop clear guidelines, policies, and procedures for academic research in alignment with those of the office of academic research (OAR)
- Align rewards and incentives with vision and goals of the strategy
- Provide junior faculty with research mentors
- Provide support to faculty in all areas related to research
- Work closely with VP for Research to ensure synergy and integration of graduate programs

Culture

- Promote and reward collaboration
- Promote a culture of research excellence
- Reinforce Accountability, Engagement, and Ownership,
- Develop and reinforce leadership skills at all levels (use Center for Creative Leadership)
- Promote collegiality and intellectual pursuit
- Lead push for QU culture of excellence

Premises and impetus to implement strategic research plan

- Academics are baseline for nation's future competitiveness
- Academic excellence is grounded in research and experiential learning
- Research competitiveness lies in the white space between disciplines, hence interdisciplinary integration is a necessity
- Research provides adapted solutions for issues facing the nation and the region
- Competition from research intensive universities (Education City) dictates boosting research capabilities and competencies of CAS and QU in general
- CAS can leverage its position as gatekeeper and to boost research and experiential learning for maximum impact
- Engagement with the community of stakeholder is crucial for relevance and long term competitiveness
- Achieving research excellence is a slow process that requires a staged approach, long terms investment in human capital and infrastructure. Hence quick action is needed
- Strategic partnerships are key to leveraging resources and expertise

The strategic plan seeks to strengthen CAS's research through the following broad goals*:

- Goal 1. Engage faculty in the strategic vision for research
- Goal 2. Identify and implement Interdisciplinary research initiatives
- Goal 3. Strengthen interdisciplinary research portfolio
- Goal 4. Enhance student research and experiential learning
- Goal 5. Establish outreach/engagement mechanisms with stakeholders
- Goal 6. Seek strategic research partnerships and collaborations

*Factoring in baseline assessment of strengths and weaknesses of current research at CAS.

Table 1: Alignment of proposed research plan objectives with broader institutional research plan

Proposed College of Arts and Sciences (CAS) Strategic Plan Goals	CAS Goal Alignment with/Contribution to	
	Research Strategic Plan Goals	QU Strategic Plan Goals
Goal 1. Engage faculty in the strategic vision for research	Goal 6: Develop a highly effective administration of the University’s research system in accordance with the mission of the reform plan	Goal 4. Provide effective and efficient support and facilities to academic missions and maintain a supportive environment for the university community
Goal 2. Identify and implement Interdisciplinary research initiatives	Goal 2: Interdisciplinary interaction in research programs	Goal 2, Objective 2.4. To establish institution-wide centres for excellence in research that support research priorities.
Goal 3. Strengthen interdisciplinary research portfolio	Goal 1: Stimulate distinguished research endeavors throughout the university and Goal 5: Increase the amount of available funds and the amount of sponsored research at Qatar University	Goal 2. Conduct quality research that addresses contemporary challenges and advances knowledge
Goal 4. Enhance student research and experiential learning	Goal 3: Provide undergraduate research experiences that enable students to fulfill their intellectual, social, and career objectives	Goal 1. Prepare competent graduates by providing high quality education
Goal 5. Establish outreach/engagement mechanisms with stakeholders	Goal 4: Employ Qatar University’s research capabilities, expertise, and resources in addressing the problems and maintaining the needs of Qatari society	Goal 3. Identify and meet the needs and aspirations of the society
Goal 6. Seek strategic research partnerships and collaborations	Partial contribution to Goals 1, 2, and 5 above	Goal 2, Objective 2.7. To identify and develop strategic research partnerships within and outside of Qatar

Action Plan for implementation

Goal 1. Engage faculty in the strategic vision for research and provide assistance with research

Rationale

As the driving force (engine) for academic research, faculty must be engaged in the development and execution of the strategic plan. Early involvement of faculty in drafting and agreeing on the strategic goals will ensure buy-in and create a sense of ownership and commitment. To ensure progress, the administrative team will provide the vision and guidelines for and outline of the strategic plan, create an atmosphere of open engagement, and rely on faculty leadership and inputs to finalize a living document that is widely embraced by CAS faculty.

Action Strategies

1. Undertake sustained effort to ensure faculty buy-in
 - Engage faculty/students in planning decision-making (identify change agents)
 - Align rewards and incentives for research with strategic objectives
 - Share/disseminate information and expectations (inform and reduce ambiguity/uncertainty)
2. Assist all faculty through the research process (in coordination with the VP for Research):
 - Demonstrate the benefits of external sponsorship
 - Match individuals with specific research opportunities
 - Help with proposal development
 - Coach faculty on research compliance issues (frame compliance as benefit vs burden)
3. Refine CAS' policies and procedures for grant management
4. Establish a support system for junior faculty in areas including:
 - Research proposal development
 - Financial and administrative support
 - Mentoring and training opportunities
 - Professional growth opportunities
 - Pilot projects

Timeline

Actions 1-4 will be implemented throughout the 3 years, with a major push in year one.

Success Indicators

- Level of participation in strategic plan development
- Increased faculty interest and involvement in research
- Increased publications by faculty in peer-reviewed journals
- Awareness of research administration and compliance requirement and procedures
- Level of faculty satisfaction with administrative support via periodic surveys

Goal 2. Identify and implement key Interdisciplinary research initiatives

Rationale

Societal needs tend to be complex and multifaceted. Hence, only interdisciplinary approaches can address them adequately. Furthermore, with the maturity of research in most traditional areas of science, research competitiveness often lies in the white spaces between disciplines. This, coupled with the globalization of sciences, makes it imperative to move into the interdisciplinary spaces to harness synergies, leverage resources, and maximize impact. CAS must look into its existing strengths and future areas of growth to identify key strategic areas for interdisciplinary research. Such areas will enable the college to focus efforts and develop critical mass and name recognition in specific target specialties.

Action Strategies

1. Listen to and capture faculty perspective (tour units)
2. Conduct an inventory of available resources and growth areas
 - Expertise of current faculty and staff,
 - Facilities at QU labs (CAS and other colleges), equipment, and resources
 - Partnerships with local and international institutions
3. Identify key interdisciplinary research initiatives based on faculty strengths, societal needs, and future strategic growth
 - Map Infrastructure requirements for identified initiatives: QU labs, labs at Education city and other partners
 - Assess needs in human capital: New faculty, Research Associates and Postdocs, faculty release, training, and collaboration
 - Select a final list of interdisciplinary research initiatives
 - Name leads and co-leads for each initiative from major contributing departments
4. Organize a faculty Summit (Summit1)
 - Get faculty input and sign up for initiatives
 - Task co-leads to work with faculty within individual initiative to write a White paper for their Initiative
5. Consolidation of research and engagement within initiatives
 - Organize birds of the same feathers meetings/coordination
 - Initiate targeted facility enhancement (e.g., a Core lab with shared use)
 - Promote submission of interdisciplinary proposal within areas
 - Monitor increased research productivity (various outputs)
6. Organize a second faculty Summit (Summit 2) to seek inputs and confirm buy-in
7. Transition into Interdisciplinary Centers and Institutes for Research Excellence
 - Focused hiring of complementary talents and acquisition of specialized facilities
 - Develop strategic plans for Research Centers/Institutes (stretch goals)
 - Develop performance criteria for Centers and Institutes
 - Fine tune faculty governance (credits for tenure and promotion, expectation, performance evaluations, teaching load, etc.)
 - Introduce endowed professors/chairs and distinction ranks as way to promote/reward excellence

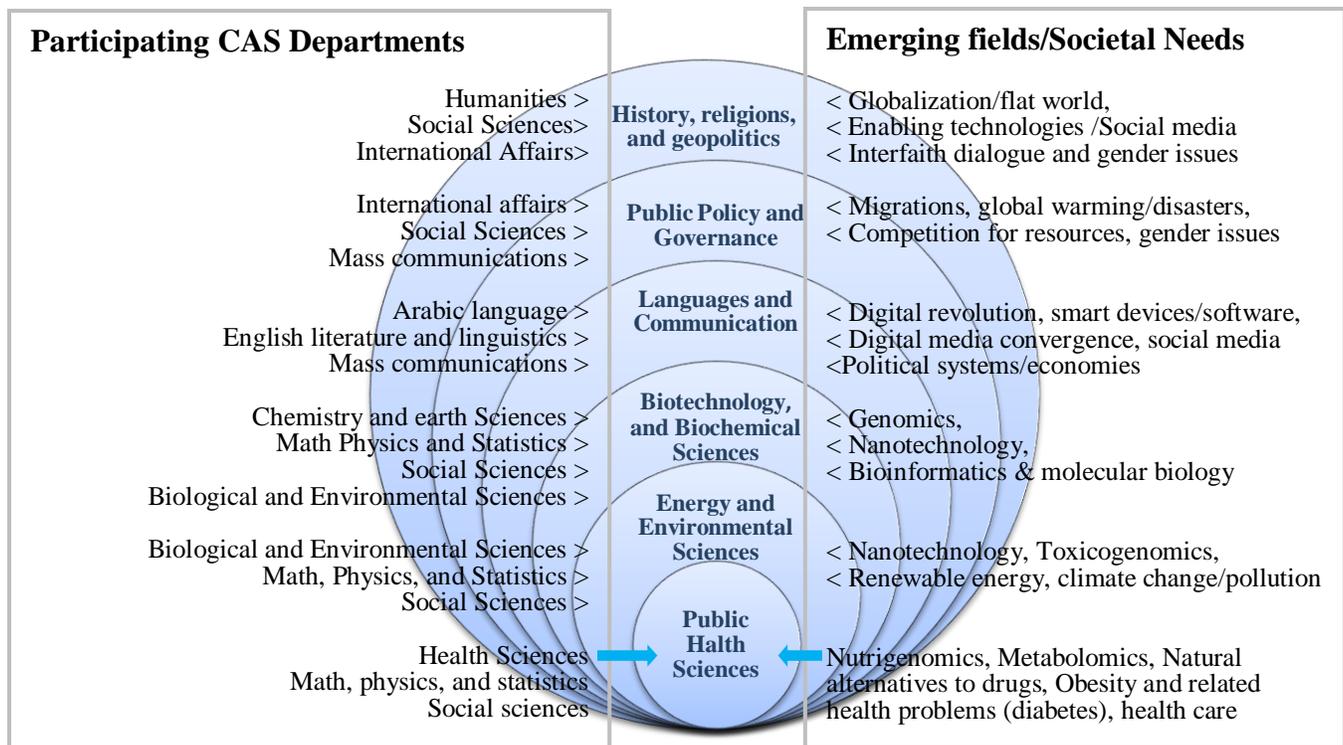


Figure 1 Possible Interdisciplinary areas for cross departmental collaboration
 (Initiatives can be based on fields or emerging topics; refinement based on faculty inputs)

Timeline

Actions 1-4 to be completed in year 1, actions 5-6 to be completed in year 2, and action item 7 in year 3 and beyond.

Success Indicators

- Level of engagement and enthusiasm of faculty
- Completion of internal scan and asset inventory
- Identification of interdisciplinary research initiatives
- Consolidation of research portfolio (number of interdisciplinary projects)
- Successful faculty summits
- Completion of White papers for interdisciplinary initiatives
- Progress toward Institutes and Centers of excellence

Goal 3. Strengthen CAS’ research portfolio

Rationale

The changing landscape of higher education in Qatar, due to the arrival of well established and research-intensive educational institutions, makes it imperative for QU to revamp its academic standing, including research as a vehicle for students’ experiential learning and a driver of

economic development. As the largest College at QU, the College of Arts and Sciences (CAS) is well positioned to take the lead in the effort to keep QU ahead of the competition. To do so, CAS must capitalize on its home turf advantage to develop a strong research portfolio coupled with sustained outreach and engagement efforts aimed at enhancing QU brand and maximizing impact on stakeholders. This will consolidate CAS's competitive advantage and attract more students and funding. While most departments within CAS lack sufficient critical mass for intensive research, selection of the interdisciplinary research initiatives described under Goal 2 should help address this weakness and enable faculty to address major societal needs through interdisciplinary collaboration. This goal is aimed at fostering faculty grantsmanship and scholarly outputs.

Action Strategies

1. Audit research portfolio
 - Inventory of internal, extramural public, and extramural private funding
 - Set strategic targets for research portfolio growth
2. Collect anonymous surveys on research direction, challenges and opportunities
3. Take steps to increase research funding (some targeted)
 - Provide targeted intramural base funding (foundation for long term sustainability)
 - Establish/prioritize intramural competitive pilot projects (peer-review committees)
 - Seek Industry-sponsored research and development (outreach/engagement)
 - Increase application to external source of funding: NPRP, US, EU, Gulf, UN
4. Reward scholarly research
 - Establish clear guidelines for a reward system for research (use Pull strategy rather than Push strategy) including:
 - ✓ Clear research productivity metrics in annual performance evaluation
 - ✓ Release time/flexibility in academic appointments
 - ✓ Credit for Promotion/distinction
 - ✓ Seek merit-based long-term contracts for outstanding faculty (e.g. tenure)
 - ✓ Awards of excellence in research
 - ✓ Opportunities for professional development
 - ✓ Financial benefits (compensation, royalties, etc)
5. Boost support personnel for research through local recruitment and new academic programs
 - Introduce interdisciplinary graduate programs (students as lifeblood of research)
 - Offer bridge programs (4 + 1, research certification) as enhancement and hook
 - Establish targeted Postdoc and graduate research exchange programs with select countries (short term stays at CAS for specific research projects)
6. Promote, monitor, and advertise research output indicators (publications, patents, presentations, awards of excellence, service to the scientific community)
7. Assess research infrastructure needs (labs, equipment, library resources) and seek ways to address deficiencies.

Timeline

Action items 1-3 can be completed in year 1 and action 4 in year 2-3, while action 5 will be ongoing throughout the 3 year plan.

Success Indicators

- Completion of administrative procedures and guidelines for faculty research
- Increased submission of proposals, especially interdisciplinary research proposals
- Scholarly output indicators (# papers, books, book chapters, presentations, patents, symposia)
- Introduction of new graduate programs and arrangement to support research through bridge programs like Postdoc exchange programs
- Professional development opportunities for faculty
- Research partnerships with industry and public sector

Goal 4. Enhance student research and experiential learning

Rationale

Students are the lifeblood of academic institutions and engine for the national drive to achieve sustainable growth and prosperity. Hence, the quality of students' training has implications for both the institutional standing and national competitiveness. Student research and experiential learning ensure graduation of a well-trained workforce with hands-on real life applications of concepts and theories learned in their fields of specialization. CAS students will particularly benefit from engaging in research given the college's heavy load of theoretical and service courses, typically required as knowledge foundation or service courses for academic training. CAS should also take advantage of its large mix of basic and applied disciplines to create experiential learning and research opportunities for students throughout their matriculation.

Action Strategies

1. Establish an undergraduate research program
 - Develop an undergraduate research program proposal
 - Appoint a program coordinator
 - Implement program (make experience fun, relevant, rewarding, and educational)
 - Organize research competitions
 - Seek opportunities for short international exchange for seniors and graduates involved in research (merit based)
2. Build linkages with local high schools
 - Invite high school interns
 - Offer precollege courses for top high school performers
 - Introduce opportunities for Labs and demos
 - Work with the associate dean for academic affairs to organize recruitment visits to local high schools
3. Introduce new Interdisciplinary graduate programs
 - Introduce certification programs as bridge until academic approval of graduate programs is granted
 - Design academic curricula for select interdisciplinary graduate degree programs
 - Assess/secure needs and resources required for successful implementation of new interdisciplinary graduate programs

- Secure approval and launch graduate programs with strong research focus (thesis option)

Timeline

Action item 1 to be completed by the end of year 1, item 2 will be initiated in year 1 but maintained through year 3, and item 3 should be completed by the end of year 2.

Success Indicators

- Implementation of undergraduate research program
- Number and quality of linkages established with local high schools
- Development and approval of select interdisciplinary graduate programs

Goal 5. Establish outreach/engagement mechanisms with stakeholders

Rationale

The true measure and strength of an educational institution is its engagement and impact on the stakeholders it serves. Scholarship of engagement is the seed for sustainable academic and research excellence as it focuses faculty on to solving relevant issues facing society and strengthen the support base for the institution. QU and CAS stand to benefit from strengthening their engagement with key stakeholders (private sector, community, public institutions) as to ensure relevance and impact of research efforts, boost brand name, and secure support (financial, political, and logistic). Today, a sustained outreach and engagement program with various stakeholders is critical given the increasing competition from the arrival of major educational institutions in Qatar. Furthermore, success of Goals 3 and 4 are dependent on establishing effective outreach and engagement mechanisms with stakeholders (Goal 5).

Action Strategies

1. Implement an outreach and industrial engagement initiative
 - a. Hire an outreach and engagement specialist and a communication specialist
 - b. Organize high School recruitment/information visits
 - c. Engage private sector
 - d. Offer High School internships (1 month early summer)
 - e. Establish an Advisory board (Leaders from industry, public sector, academia)
 - f. Boost communication channels (newsletters-both electronic and print, mailing List, sponsored events, fundraising) for dissemination of information and branding
 - g. Organize sustained outreach to CAS Alumni
 - h. Develop a monthly or quarterly newsletter aimed at the stakeholders and the general public

Timeline

All items can be initiated in the first year and completed by the end of year 3.

Success Indicators

- Hiring of support personnel for the area

- Number of contacts to and events benefiting stakeholders (e.g., schools, community, companies)
- Number of individuals and/or organization that benefited from outreach activities
- Multiple ongoing communications with stakeholders
- Visibility of the College in community (via word of mouth or formal surveys)

Goal 6. Seek strategic research partnerships and collaborations

Rationale

The convergence to interdisciplinary research has led academic institutions to not only reorganize internally for enhanced synergy but also to look into forming strategic linkages with external institutions to leverage resources. CAS must seek strategic partnerships with other institutions both inside and outside of Qatar. The guiding principles for such partnerships will be based on shared values, complementary expertise, uniqueness of resources, and strategic growth considerations.

Action Strategies

- Seek synergistic research partnerships with others
 - Internal colleges, departments and QU (expertise and facilities)
 - Local institutions (public and private, including Education City)
 - International (in the US and elsewhere for mutual use of facilities and expertise, exchange, training)
- Leverage human resources through
 - Joint projects,
 - Exchange,
 - Complementary expertise,
 - Joint appointments,
 - Internships
 - Student training for academic credit

Timeline

Ongoing throughout the 3 year plan.

Success Indicators

- Number and quality of partnerships formed
- Number of faculty and students who benefited from partnerships
- Impact on research outputs (joint project, co-authorship, co-organization of scientific activities)
- Leveraging of facilities and resources (value of access to specialized facilities/equipment)

III-Guiding Principles for Implementation

Research projects within interdisciplinary research initiatives must meet the “Focus, Scale and Impact”-FSI requirement as defined below:

Focus: focused effort and resources (human and material) on a major societal problem (e.g. obesity/diabetes) within the scope of one of the Interdisciplinary initiatives.

Scale: Large projects (potentially large for pilot projects) involving multidisciplinary and interdisciplinary collaboration in partnership with stakeholder (e.g., Interdisciplinary effort targeting obesity and diabetes through research, education and outreach/engagement).

Impact: Impactful outcome as measured by contribution toward addressing target problems and stakeholder buy in.(e.g., wide reaching research, education, and outreach projects tailored to the Qatari society).

Internal and external funding will be sought for pilot projects and full-scale projects within interdisciplinary initiatives. Preference will be given to projects that meet the FSI requirement and adopt a four wheel-structure for collaborative arrangement. This four-wheel structure for sustainable impact consists of the:

1. Initiating Department (Within a any of the interdisciplinary research initiative)
2. At least one internal partner (CAS Department and/or QU college)
3. At least one external collaborator (e.g., an educational and/or research organizations within and outside Qatar)
4. At least one outreach/community partner (e.g. School System, Department of public health or other state government agency, Community organization-NGO, private companies).

Implementation of the strategic plan should take into account insights from and consideration of:

- Timely self-assessment (internal scan)
- SWOT analysis (external scan)
- Reevaluation of value proposition (Why QU? and why CAS?) from the perspectives of students and faculty
- The necessity of Brand building/maintenance
- The need for coopetition (collaborative competition) with other colleges and Universities to leverage resources and maximize synergies.

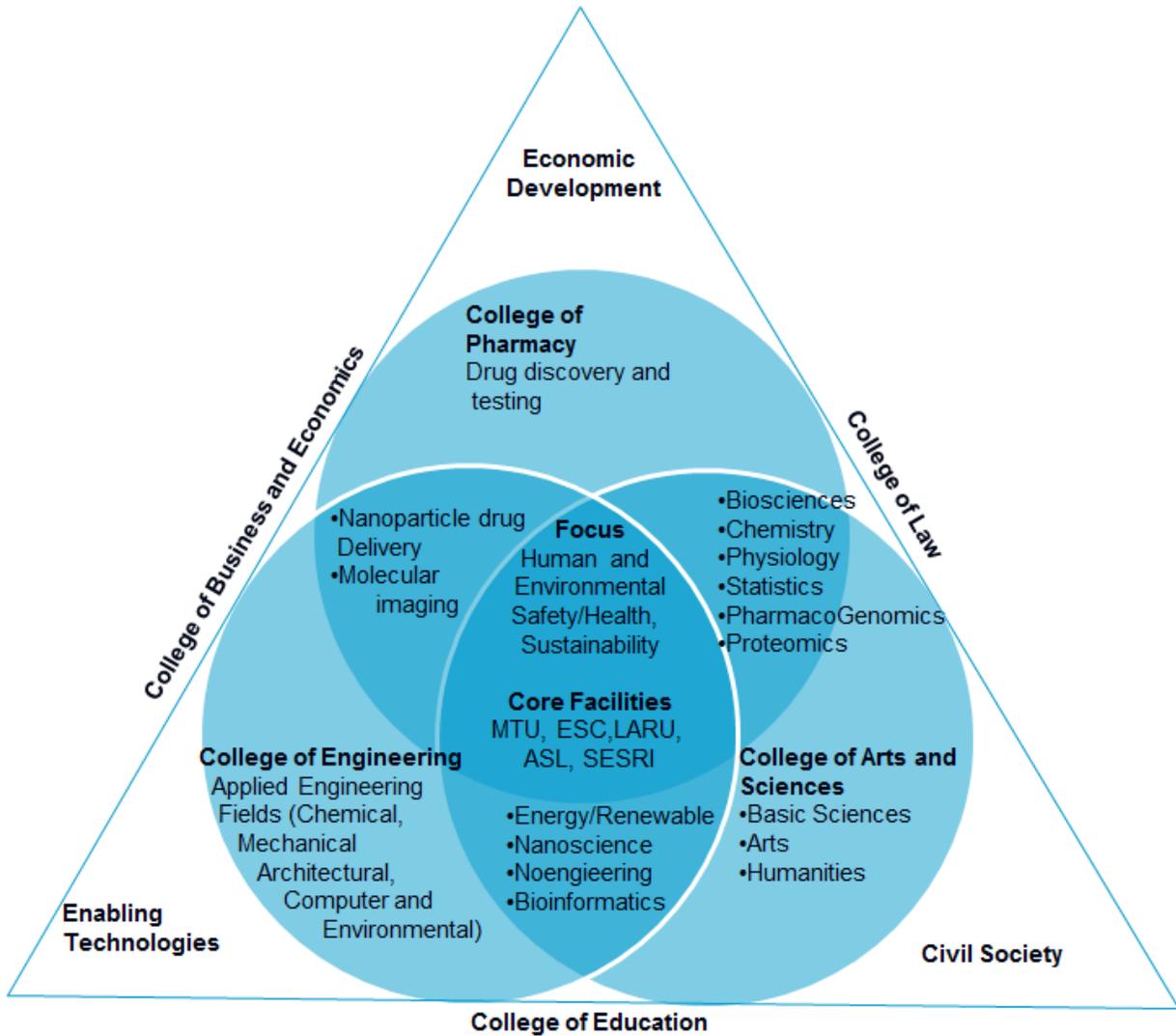
Appendix

Possible Interdisciplinary areas for cross departmental collaboration-Listing format (can be refined further based on additional faculty inputs)

1. Public Health Sciences (PHS)
 - a. Health Sciences
 - b. Math, physics, and statistics
 - c. Social sciences
 - d. Emerging Sciences (Nutrigenomics, Metabolomics)
 - e. Biological Sciences and Environmental Sciences
2. Energy and Environmental Sciences (EES)
 - a. Biological and Environmental Sciences
 - b. Math, Physics, and Statistics
 - c. Social Sciences
 - d. Emerging Sciences (Nanotechnology, Toxicogenomics, renewable energy)
3. Biotechnology, and Biochemical Sciences (BBS)
 - a. Chemistry and earth Sciences
 - b. Math Physics and Statistics
 - c. Social Sciences
 - d. Biological Sciences and Environmental Science
 - e. Emerging Sciences (Genomics, Nanotechnology, Bioinformatics)
4. Languages, and Communication Technology (LCT)
 - a. Arabic language
 - b. English literature and linguistics
 - c. Mass communication and information sciences
 - d. Emerging Technologies (digital revolution, smart devices,)
5. Public Policy and Governance (PPG)
 - a. International affairs
 - b. Social Sciences
 - c. Mass communications
 - d. Emerging areas (Migrations, global warming/disasters, competition for resources)
6. History, Religions, and Geopolitics (HRG)
 - a. Humanities
 - b. Social Sciences
 - c. Emerging areas (global village, flat world, enabling technologies, interfaith dialogue)

Table 2. Initial grouping of CAS faculty by department & proposed interdisciplinary areas

Potential research Initiative at CAS	Contemporary Societal needs Addressed	Emerging Interdisciplinary Fields	Participating Departments	Potential faculty members from various Departments (PLEASE WRITE IN)
Public Health Sciences (PHS)	Obesity and related chronic Diseases Aging	Nutrigenomics/ Metabolomics	Health Sciences Math, p Biological and Environmental Sciences ysics, and statistics Social sciences, Others?	
Energy and Environmental Sciences (EES)	Renewable energy Pollution sustainability	Nanotechnology Biotechnology Toxicogenomics	Biological and Environmental Sciences Math, Physics, and Statistics Social Sciences, Others?	
Biotechnology, and Biochemical Sciences (BBS)	Biomedicine, Food biotech, bioremediation	Biotechnology Nanotechnology Bioinformatics	Chemistry & earth Sciences Math, Physics, and Statistics Social Sciences, Others?	
Languages, and Communication Technology (LCT)	Connectivity, Business integration	Digital revolution Social Media	Arabic language English literature/linguistics Mass communication and information sciences, Others?	
Public Policy and Governance (PPG)	Globalization Global warming	Green economy Cap and trade	International affairs Social Sciences	
History, Religions, and Geopolitics (HRG)	Religious and ethnic conflicts Gender issues	Interfaith dialogue Gender equality	Humanities Social Sciences, International affairs Others?	



CAS's Interdisciplinary connectivity with other QU Colleges