College of Engineering Strategic Plan
2023-2030

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Key Elements of the Plan

⌖ Vision

To shape the future through resilient leadership, innovation, and transformative technologies for societal well-being.

◎ Mission

Empowering future-ready graduates through world-class education, research, and innovation, cultivating entrepreneurial mindset, sustainability, digital transformation, and societal impact.

💎 Core Values

Excellence	We pursue the highest standards in education, research, and professional practice.
Innovation and Entrepreneurship	We foster creativity, an entrepreneurial mindset, and the ability to turn ideas into impactful solutions.
Integrity and Ethical Leadership	We uphold the principles of honesty, accountability, and ethical responsibility in all endeavors.
Sustainability and Social Responsibility	We are committed to sustainable development and to serving the needs of society through engineering solutions.
Industry Engagement and Collaboration	We value strategic partnerships with industry, government, and academia to co-create knowledge and innovation.
Resilience and Lifelong Learning	We promote adaptability, continuous growth, and the ability to thrive in an ever-changing world.
Cultural Identity and Diversity	We embrace our cultural heritage and promote inclusivity, global awareness, and mutual respect.

Initiatives and Projects

Goal 1:
Continuously elevating teaching and learning methods to prepare a distinguished, creative graduate capable of competing in the labor markets.

Initiative 1.1:
Enhancing innovation in teaching

Projects

1.1.1	Adopting innovative teaching methods, such as using interactive technologies, project-based learning, and other modern approaches
1.1.2	Establishing a mechanism for faculty to share experiences on innovative teaching best practices

Initiative 1.2:
Continuously updating courses to keep pace with developments and labor market needs

Projects

1.2.1	Aligning curricula with labor market needs and academic accreditation requirements
1.2.2	Updating and modernizing academic content to keep pace with scientific and technological developments
1.2.3	Increasing the number of joint capstone projects with industry partners by engaging directly with companies, identifying technical challenges suitable for students, and coordinating joint supervision between faculty members and industry representatives.

Initiative 1.3:
Improving student experience and academic success

Projects

1.3.1	Developing a system to identify students at risk of academic failure
1.3.2	Analyzing study plans and student pathways, and reviewing them to ensure smooth transitions between courses and academic levels

Initiative 1.4:
Enhancing student readiness for the labor market

Projects

1.4.1	Providing students with additional professional training by linking selected courses to content from accredited professional training providers, enabling them to earn certificates in high-demand fields such as Artificial Intelligence, Sustainability, and Project Management
1.4.2	Increasing the number of interactive industry visits linked to academic courses by coordinating with companies to host students, aligning each visit with specific learning outcomes, and organizing interactive activities such as technical presentations and guided tours, while requiring students to prepare reports or practical solutions documented in a digital portfolio.

Goal 2:
Enhancing learning, growth, and skill development opportunities for college students beyond the classroom

Initiative 2.1:
Expanding sports, cultural, artistic, and social activities for students

Projects	
2.1.1	Supporting the participation of college students in sports, cultural, artistic, and social activities by organizing regular events, coordinating their involvement with the relevant university entities, and providing logistical and advisory support that contributes to their personal development and skill enhancement

Initiative 2.2:
Enriching the learning environment outside the classroom

Projects	
2.2.1	Promoting volunteer work and community service aligned with Qatar National Vision 2030 by organizing targeted volunteer initiatives and coordinating student participation with community organizations
2.2.2	Enhancing the role of student clubs in community engagement and extracurricular activities by organizing meaningful student-led initiatives, coordinating events with relevant entities inside and outside the university, and providing guidance and support to ensure active and sustained participation

Initiative 2.3:
Activating the role of the College of Engineering alumni in supporting students

Projects	
2.3.1	Establishing a network that connects students with alumni by organizing career-oriented mentorship programs, coordinating regular meetings to transfer practical experience, and developing communication channels that enhance students' readiness for their career paths and support the development of their professional relationships
2.3.2	Implementing a program to host distinguished alumni that includes planning a series of regular meetings and interactive lectures, maintaining continuous coordination with alumni and employers, and preparing supporting materials before and after each session, in a way that inspires students and guides them toward informed career paths

Goal 3:
Strengthening the educational and academic collaboration between the College of Engineering and the Health sector

Initiative 3.1:
Strengthening educational collaboration between the College of Engineering and the health sector

Projects	
3.1.1	Supporting the implementation of joint capstone projects between engineering students and the health sector by coordinating the identification of real, practice-based problems and enabling joint supervision with specialists from the health sector to ensure the quality of the projects and their alignment with the sector's needs.
3.1.2	Studying the possibility of creating a joint academic program between the College of Engineering and the health sector.

Initiative 3.2:
Strengthening research collaboration between the College of Engineering and the health sector

Projects	
3.2.1	Supporting joint research projects between the College of Engineering and the Health Sector by identifying shared research priorities, forming multidisciplinary research teams, coordinating access to laboratories and data, and developing joint research proposals targeting both internal and external funding.
3.2.2	Expertise and showcase innovations in the medical field.
3.2.3	Studying the possibility of creating a joint research center between the College of Engineering and the health sector.

Goal 4:
Achieving excellence in impactful scientific research to build national capacities and accomplish sustainable development in Qatar

Initiative 4.1
Prioritizing research projects aligned with the national development goals and the SDGs.

Projects

4.1.1	Providing training sessions for faculty members on how to apply for grants and funding agencies
4.1.2	Creating a database of national challenges in key sectors such as energy, water, health, and others
4.1.3	Organizing an annual forum titled "Innovation for Solving National Challenges" that connects academics with the industry sector
4.1.4	Conducting an annual internal classification of research outputs according to the SDGs to raise awareness

Initiative 4.2
Engaging undergraduate and postgraduate students in applied research projects, especially graduation projects that address societal challenges

Projects

4.2.1	Supporting the transformation of graduation projects into published research papers
4.2.2	Supporting student research projects related to national challenges by providing an enabling research environment and guiding them toward available student funding opportunities
4.2.3	Organizing an annual award for the best applied student research
4.2.4	Exploring the integration of an independent research project into the curriculum during the third year or early fourth year, with the goal of strengthening students' research skills prior to graduation

Initiative 4.3:
Focusing on interdisciplinary scientific research within the College and with national partners to address national challenges.

Projects

4.3.1	Launching multidisciplinary research groups that focus on national priorities such as smart cities and clean energy
4.3.2	Supporting joint research proposals with colleges, government entities, and industry by facilitating connections between researchers and external partners, and establishing a clear mechanism to enhance the quality and impact of joint proposals
4.3.3	Utilizing industry and government laboratories as experimental centers by developing a clear collaboration mechanism that ensures the optimal use of these laboratories in a way that achieves mutual benefit for both parties
4.3.4	Forming a multidisciplinary research team of faculty members from engineering, education, artificial intelligence, and educational innovation, with a focus on developing and publishing research in STEM education
4.3.5	Providing awards and incentives for collaborative research and multidisciplinary projects, and establishing criteria for selecting these research works

Initiative 4.4:
Strengthening research leadership and improving the college's position in global rankings

Projects

4.4.1	Providing editorial and financial support for publication in Q1/Q2 journals
4.4.2	Encouraging researchers and faculty members to participate in international journal editorial boards by including this activity as a criterion in academic promotion evaluations
4.4.3	Establishing international research partnerships with highly ranked universities
4.4.4	Providing training and editorial support in collaboration with the university library or publishing offices
4.4.5	Regular monitoring of researchers' digital profiles on platforms such as ORCID, Google Scholar, and Scopus and establishing a mechanism to utilize these identities to encourage researchers to enhance the quality of their scientific research

Goal 5:
Establishing a stimulating environment for innovation and entrepreneurship to enhance creativity and transform knowledge into innovative projects and solutions with tangible developmental impact.

Initiative 5.1:
Promoting a culture of entrepreneurship and innovation by building capacities and transforming research outputs into innovative applications and products

Projects

5.1.1	Organizing workshops to train researchers in innovation, marketing, and intellectual property
5.1.2	Hosting experts in entrepreneurship and innovation from academia and industry
5.1.3	Converting innovation and research outputs into patents or prototypes by providing researchers with the necessary technical and advisory support

Initiative 5.2
Developing students' entrepreneurial capabilities and enabling them to showcase their innovative projects in various forums

Projects

5.2.1	Organizing diverse events (e.g. conferences, competitions, seminars, etc.) on entrepreneurship and innovation
5.2.2	Supporting students' participation in national and international events to showcase their entrepreneurial projects by providing organized academic and logistical support and enhancing presentation skills to increase project visibility

Initiative 5.3

Enhancing experiential learning by integrating entrepreneurship and innovation concepts into academic programs

Projects	
5.3.1	Integrating innovation and entrepreneurship into graduation projects by implementing mentoring and training programs that connect students with business development and commercialization strategies, including project guidance, hands-on workshops, and support for applying real-world solutions, to enhance students' practical skills
5.3.2	Including more elective courses in entrepreneurship to support experiential learning and enhance students' ability to launch innovative projects

Initiative 5.4:

Leveraging smart labs and digital modeling resources to support practical learning and advanced engineering research

Projects	
5.4.1	Ensuring the sustainability of the 3D printing and additive manufacturing lab to support engineering projects and innovation by implementing regular operational and maintenance plans, upgrading equipment and materials, and providing training and technical support to students to ensure the lab's readiness and capability to support projects.
5.4.2	Leveraging the Internet of Things and Smart Systems Lab to support entrepreneurship and innovation by developing training and mentoring programs, providing technical support for student projects, and enabling collaboration with internal units to develop prototypes and innovative solutions

Goal 6:
Strengthening the role of the College of Engineering as a key player in the field of digital transformation at the national and global levels

Initiative 6.1:
Developing, sharing, and exchanging knowledge and expertise in digital transformation at the national and global levels

Projects	
6.1.1	Organizing national and international seminars, conferences, and workshops on digital transformation and its tools to exchange expertise, promote digital culture, and strengthen partnerships with relevant stakeholders.
6.1.2	Transferring digital knowledge and expertise to industry and community sectors by involving them in the College's scientific projects and establishing a mechanism to utilize project outcomes in addressing the direct challenges faced by these entities

Initiative 6.2:
Strengthening scientific research in areas that support Qatar's digital transformation journey

Projects	
6.2.1	Increasing the number of research projects aligned with the digital transformation needs of Qatar's economy and society by establishing a mechanism to guide researchers toward nationally prioritized digital domains, and to identify and support high-impact research projects in digital transformation.
6.2.2	Increasing the number of master's and doctoral theses aligned with Qatar's digital transformation needs, and graduating highly qualified postgraduate talents to lead digitization efforts in the country.

Initiative 6.3:
Incorporating the digital skills essential for Qatar's digital transformation into the College of Engineering's curricula

Projects

6.3.1	Updating engineering courses related to digital transformation to keep pace with rapid digital advancements and global best practices.
6.3.2	Introducing specialized courses on digital transformation and its applications across all engineering disciplines at the college, ensuring alignment with labor market needs.

Initiative 6.4:
Leveraging technology to enhance teaching and learning methods and to improve the efficiency and quality of learning

Projects

6.4.1	Organizing workshops and training programs for faculty members to enable them to effectively use AI tools in improving the quality of education.
6.4.2	Automating the college of engineering's special processes, such as archiving student graduation projects and internships management.

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Goal 7:
Support the development of the campus and improve the university environment

Initiative 7.1:
College of Engineering support for the University's campus development initiatives through digital transformation

Projects

7.1.1	Automating administrative procedures in the College of Engineering, such as approvals, reports, and correspondence, with the aim of improving operational efficiency and reducing processing time.
7.1.2	Organizing training workshops for administrators on the effective use of digital infrastructure and Computer-Aided Facility Management (CAFM) systems to improve administrative processes in the College of Engineering.

Initiative 7.2:
Participation in studies related to reducing traffic congestion and promoting sustainable transportation inside the campus

Projects

7.2.1	Conducting a study on traffic and parking inside the campus using digital simulation models to propose strategic solutions for traffic congestion
7.2.2	Conducting studies on ways to reduce internal travel time and improve safety within the campus

Initiative 7.3:
 Enhancing scientific research related to supporting campus development

Projects

7.3.1	Encouraging graduation projects to address campus development issues by coordinating with relevant units to identify priority challenges, providing academic and technical guidance to students, and offering the data and support needed to develop solutions in areas such as sustainability, facility management, sustainable transportation, and landscaping/urban design.
7.3.2	Increasing research projects and consultancy studies related to developing smart and sustainable campus infrastructure by strengthening collaboration with relevant units, forming multidisciplinary research teams, and collecting and analyzing data to develop practical solutions that enhance campus life quality.

Initiative 7.4:
 Contributing to creating an attractive environment inside the College of Engineering building

Projects

7.4.1	Coordinating with the facilities management department to provide diverse and healthy food options in the College of Engineering building by identifying nutritional needs, engaging with service providers, and monitoring the quality of offerings to ensure they meet the needs of students and faculty members
7.4.2	Improving shared spaces (lounges) to create a more attractive environment for students.

KPI

KPI | Strategic Goal 1 (Excellence in Education)

Goal:	
Continuously elevating teaching and learning methods to prepare a distinguished, creative graduate capable of competing in the labor market	
No.	**KPI**
KPI 1.1	**Number of courses adopting innovative teaching methods**
KPI 1.2	**Student satisfaction rate with innovative teaching practices**
KPI 1.3	**Number of courses embedding modern content (AI, IoT, sustainability)**
KPI 1.4	**Retention rate of students after first year**
KPI 1.5	**Number of senior design projects conducted in collaboration with the industry**
KPI 1.6	**Percentage of graduates employed within 1 year of graduation**

KPI | Strategic Goal 2 (Expanding Learning Opportunities beyond the classroom)

Goal:	
Enhancing learning, growth, and skill development opportunities for college students beyond the classroom	
No.	**KPI**
KPI 2.1	**Number of sportive, cultural, and social activities organized annually**
KPI 2.2	**Percentage of students participating in volunteerism and community service through student clubs**
KPI 2.3	**Student satisfaction with learning spaces, facilities, and support services such as Success Oasis and Academic Advising**
KPI 2.4	**Number of participations in national and international competitions**
KPI 2.5	**Student membership rate in accredited professional organizations**
KPI 2.6	**Number of events related to alumni**

KPI | Strategic Goal 3 (Collaboration with Health Cluster)

No.	KPI
Goal:	
Strengthening the educational and academic collaboration between the College of Engineering and the Health sector	
No.	**KPI**
KPI 3.1	**Number of graduation projects by engineering students related to the health sector**
KPI 3.2	**Number of joint research projects between the College of Engineering and the health sector**
KPI 3.3	**Number of joint scientific events with the health sector**
KPI 3.4	**Number of published scientific research papers resulting from collaboration with the health sector**

KPI | Strategic Goal 4 (Impactful Research)

No.	KPI
Goal:	
Achieving excellence in impactful scientific research to build national capacities and accomplish sustainable development in Qatar	
No.	**KPI**
KPI 4.1	**Percentage of published research papers and theses related to national development goals or the Sustainable Development Goals (SDGs)**
KPI 4.2	**Number of research papers published in Q1 / Q2 journals**
KPI 4.3	**Number of joint multidisciplinary research projects within the college or with relevant partners**
KPI 4.4	**Average number of citations per faculty member**
KPI 4.5	**Number of research papers or articles published with student participation**
KPI 4.6	**Number of student projects that are funded or have received research awards**
KPI 4.7	**Number of research papers or projects from collaboration with government or industry**

KPI | Strategic Goal 5 (Innovation and Entrepreneurship)

Goal:
Establishing a stimulating environment for innovation and entrepreneurship to enhance creativity and transform knowledge into innovative projects and solutions with tangible developmental impact

No.	KPI
KPI 5.1	**Number of seminars or workshops conducted with academic and industrial sectors**
KPI 5.2	**Number of student competitions and events in the fields of innovation and entrepreneurship**
KPI 5.3	**Number of partnerships and applied research projects with industry to promote innovation and sustainable development**
KPI 5.4	**Number of courses that include entrepreneurship content**
KPI 5.5	**Number of patents filed or registered annually**

KPI | Strategic Goal 6 (Digital Transformation)

Goal:
Strengthening the role of the College of Engineering as a key player in the field of digital transformation at the national and global levels

No.	KPI
KPI 6.1	**Employer satisfaction with graduates' competencies related to digital transformation**
KPI 6.2	**Number of lectures, seminars, and training courses on digital transformation and its tools**
KPI 6.3	**Percentage of master's and doctoral theses related to national needs in digital transformation**
KPI 6.4	**Percentage of funded research projects involving a non-research national institution as a direct beneficiary of the project results**

KPI | Strategic Goal 7 (Development of the Campus)

Goal:
Support the development of the campus and improve the university environment

No.	KPI
KPI7.1	**Percentage of the College's responses to University Administration requests for studies or proposals related to campus development**
KPI7.2	**Number of seminars, and training workshops on effectively use of digital infrastructure to improve administrative processes in the College of Engineering**
KPI7.3	**Percentage of satisfaction of College of Engineering members with the services provided inside the College building.**
KPI7.4	**Percentage of automated administrative processes in the College of Engineering**
KPI.7 5	**Number of graduation projects and research projects related to campus development**

College of Engineering