



پوهنتون كاردان  
KARDAN UNIVERSITY

# Strategic Plan

2018 – 2023

**Faculty of Engineering and  
Technology**



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## **Faculty Overview**

The Faculty of Engineering and Technology offers the degrees of Bachelor of Civil Engineering (BCE) and Bachelor of Computer Science (BCS). The Faculty of Engineering and Technology at Kardan University has a long and rich tradition of excellence in teaching, research, and service. The programs of Engineering and Computer Science are ranked among the very top in their fields. The departments strive to maintain and enhance this position through a continuing process of creating and identifying new opportunities and moving swiftly, but thoughtfully, to bring them to fruition. Our professoriate includes national and international faculty members. They teach nearly 90 courses to CCA 900 undergraduate students. Both departments are led by highly qualified engineers and computer science professionals who are recognized by external agencies and have been ranked among the best in Afghanistan.

## **Scope**

This document serves as a guide for the next five years in terms of the areas in which we are dedicated to affecting positive change and strengthening our Faculty. It will guide us build on the remarkable education offered to our students and increase our social impact through research and development. The scope of this document is not far-reaching, nor is it meant to be prescriptive of new ideas that might be identified during its five-year lifecycle. This document will be complemented by operational planning with regards to teaching, research, advancement, infrastructure, communications, recruitment and outreach, as well as other areas, as needed. Our operational plans will be updated regularly to ensure we are holding ourselves accountable for realizing our strategic goals through specific and measurable actions. Towards the end of 2019, this Strategic Plan will allow us to critically reflect on our progress and inform the next round of strategic planning.

## **Mission Statement**

To develop and transfer innovative applications of Civil Engineering, Science and Technology to improve planning, design, and practice

## **Vision Statement**

Producing a cadre of highly qualified professionals in civil engineering and computer science

## Values:

- **Teaching:** Highly effective and innovative (teaching employing) relevant curriculum
- **Faculty:** Proficient faculty, who are accessible, responsive, and dedicated to student learning
- **Students:** Actively engaging students in their professional and personal development
- **Learning:** A highly interactive learning environment that fosters strong relationships and student success
- **Global Engagement:** Global engagement and collaboration to increase awareness about international opportunities
- **High Standards:** High standards that reflect best practices and ethical behavior, stimulate intellectual growth, and promote continuous improvement
- **Diversity:** acceptance and respect for human and ideological differences
- **Service:** Service to the community that promotes strong partnerships and advances professional and technical development

## Objectives:

### **Pedagogical (Academic):**

1. Continuously review curriculum content to ensure that best practices are represented.
2. Instill in our students the Kardan University Educational Goals:
  - A. Effective communication;
  - B. Technical and professional computer and information literacy;
  - C. Independent technical and critical thinking
  - D. Intellectual capacity for change
  - E. Preparation to assume technical and professional leadership roles

**Research:**

1. Faculty will be affiliated with at least one relevant professional organization and will study the professional journals in their fields.
2. Faculty will, as part of their development plans, identify potential applied or theoretical research interests and will plan to conduct research and share the results with the appropriate audiences.
3. Faculty will help students identify opportunities for independent study, internships, and co-ops that have a research component.

**Public Stewardship:**

1. Offering students opportunities to volunteer their time and talents to organizations through coursework or professional student organizations.
2. Continuous review of course contents and curricula to ensure they match modern international standards.
3. Maintaining our commitment to student service.

**Academic Programs**

We encourage our students to explore the academic landscape, venturing into unfamiliar fields of knowledge and, perhaps, discovering new passions that will take them in a different direction altogether. Along the way, faculty members help guide them, and fellow students offer diverse perspectives that can shed new light on the path. We also encourage our students to travel literally, by going abroad for study, research, or work.

Following academic programs are offered in the Faculty of Engineering and Technology by Kardan University:

1. Bachelor of Civil Engineering
2. Bachelor of Computer Science

## **Planning Process**

Meetings were held with the faculty to identify work activities and to determine improvement opportunities. The group also provided input and worked with their respective faculty to develop future research arenas. Finally, separate meetings were held with the Academic Administrators, Assistant and Associate Professors. A faculty meeting was focused on a review of the draft plan. Input based on the analyses, the group coordinator input, and the faculty meetings were used to develop and finalize this strategic plan. Following the completion of the draft, the entire faculty was given an opportunity to provide critical reviews of the document and it was revised according to the collected comments. As with any planning document, this strategic plan becomes a living document that should be continually updated and amended as unforeseeable events.

## **Strategic Objective**

### **1. Improve the recruitment of talented and skilled graduate students**

#### Commitments:

- Hosting recruiting events for graduate students.
- Communicating with ministries, NGOs and private sector organizations for providing job opportunities.
- Working with the Office of Career Services for finding employment opportunities for graduates.

### **2. Ambitiously seek to increase student enrolment and quality.**

#### Commitments:

- Vigorously engaging in high school recruitment efforts.
- Communicating and promoting the fact that students can expect to find an enriching academic experience through internships, interaction with practicing engineers, computer professionals and managers, service learning, and study abroad programs.
- Providing teaching assistantship resources for top graduate students.

### **3. Develop high impact research initiatives**

#### Commitments:

- Continue to seek new industrial research collaborations as well as collaborative opportunities within and outside of the university to increase the research base.
- Create additional partnerships with academics and industry and expand the faculty's research base.

### **4. Revise curriculum to meet the needs of the profession.**

#### Commitments

- Conducting a review of the curriculum, focused on the core, lab experiences, to assess our ability to meet the needs of as specified by the MoHE and market.
- Conducting and developing new subject recommendations by the Curriculum Committee that will then be discussed and voted on by the entire faculty. The ability to meet accreditation requirements will be a necessary part of those discussions.

### **5. Continuously improve computer lab, CISCO / virtual lab, construction materials lab and instructional facilities.**

- Engineering and Technology Faculty strives to enhance the quality of facilities by working with the university to increase classroom space and improve the practical lessons in labs.

### **SWOT Analysis**

This section gives a concise self-assessment of the strengths, weaknesses, opportunities, and threats for the Faculty of Engineering and Technology.

#### **Strengths**

- Home to numerous world-class and nationally-strong research groups
- Excellent undergraduate student population
- Numerous faculty research and teaching awards each year
- Students do well on scholarship applications
- Strong teaching evaluations

- Collegial working environment
- Excellent research infrastructure
- Strong leadership team
- Excellent working relationship with other Faculties
- Excellent resource center and learning facilities

**Facilities:**



*The Resource Center*



*CISCO and Computer Lab*



*Digital Library*



*Classroom*

## **Weaknesses**

- Lack of distinguished professors
- Limited space for the Engineering and Technology Faculty (Faculty room, Materials lab)
- No several publications
- Few internal seminars and special presentations
- Lack of cooperation of governmental administration for student practical work

## **Opportunities**

- Invest strategically to sustain and grow areas of world-class engineering
- Increased attention on teaching and learning innovation
- Use of technology to enhance learning
- Make departments more research oriented
- Increase in the number of high school graduates
- More opportunities for modern higher education than any other time

## **Threats**

- Unfair competition of other private universities
- Restriction on Master's programs by Ministry of Higher Education, especially in engineering
- Restriction on creation of new branches and faculties
- Declining the income level of the households



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## Faculty of Engineering and Technology

### Strategic Plan–Implementations Plan

Activities	Needs	Output	Source of Finance	Time of activity
Preparation for ABET Accreditation in Engineering and Technology for both programs (BCS and BCE)	ABET accreditation is proof that a program has met standards essential to produce graduates ready to enter the critical fields of applied science, computing, engineering, and engineering technology.	To articulate the policies and Procedures among both programs that govern the ABET accreditation process.	Kardan University	Every semester, Starts from March 2018
Reviewing the curriculum and developing contents considering national and international standard	Having an up to date curriculum according to the needs of the society	Offering educated youths to the society equipped with Technical and managerial skills.	Kardan University	At least every year 15-20 <sup>th</sup> (month of January).
Developing a comprehensive mechanism for recruiting prominent lecturers	Making the teaching task more specialized based on the specialization of lecturers	Deep understanding of the subject contents in all relevant departments	Faculty of Engineering and Technology	At the start of the academic year January 1 <sup>st</sup> .
Developing a policy for innovation of technology and other means of learning	Modernizing the higher education and learning methods.	Student familiarity with advanced devices and new learning methods.	Faculty of Engineering and Technology	Every semester January; June

<b>Activities</b>	<b>Needs</b>	<b>Output</b>	<b>Source of Finance</b>	<b>Time of activity</b>
Adding new specializations such as master's in Construction project management	Compatibility with higher education and current needs of the society and growth and development of academic programs.	Absorbing new students and enriching their knowledge.	Kardan University	June. 2019
Establishing a Reward and Recognition Committee	Encouraging lecturers who show superior performance	Improves the quality of academic and administrative tasks	Kardan University and Faculty of Engineering and Technology	March, 2019

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